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**SECTION: *ECONOMICS, BUSINESS ADMINISTRATION,  
TOURISM AND ECONOMIC STATISTICS***



## TRIAL-ROLE: PUBLIC, POLICY CULTURAL AND CONSUMER-DYNAMICS OF CREATIVE PROCESS

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**Abstract:** *Is the audience a sponsor or a consumer? I.1 What are the forms of funding and investment in art? I.2 What are the forms of art education in the community? Knowing the audience is a very important first step in the development of appropriate strategies and the achievement of the mission proposed by the organizers. An important issue is the media coverage of the cultural events, especially announcing them in as many different types of media as possible. Indeed, in many cases there is a causal relationship between financial possibilities of the Romanians and the access to quality culture. Tickets devoted to plays or famous opera performances usually have prices that are inaccessible to most citizens. The situation is even worse in the case of Romanians who can barely afford to pay their monthly bills and daily food. Equally true is that new forms of culture and the progress of new channels of communication in the virtual environment can be also invoked as unequal competitors for the classical forms of culture, especially since accessing them is free of charge, even though the actual content they provide is often superficial. On the other hand, to motivate the low interest in culture manifested by the Romanians only from such a perspective would create a slightly distorted image. Lack of financial resources cannot be reliably invoked, as even if the budget does not allow someone to attend a play as a spectator, one can always attend a library in order to read a book as an alternative to a second-grade film that he would be watching sitting at home, in an armchair. Therefore, in my opinion, there's another obvious element interfering into the cultural consumption equation we discuss - convenience. Cultural behavior, in the most direct sense of spiritual cultivation, also depends a lot on the family development role. Without resorting to hasty generalizations, it is nevertheless a fact that most of our children do not read or read very little, and they only do that because they find themselves conditioned by the syllabus for the examinations. Maybe today's youth belonging to what is called the "emerging generation" is also to blame here, this being a pragmatic and goal oriented generation, but which is unfortunately very less leaning towards forms of culture that the previous generations grew up with. The domestic electronic network of cultural goods and cultural domestic consumption. The most spread goods of the physical domestic network are electronic devices: TV, mobile phone, radio. One possible explanation is the rapid development of technology and access to personal computers, the devices for tracking and processing of music and video images, especially the fulminant technological change, moving very fast from static machines to small-sized devices, becoming portable, mobile. For professionals working in the cultural and creative sectors, this research becomes an essential tool for the cultural programs and projects they run through, because of the detailed information they provide in each sector of activity (performing arts, national cultural heritage, museums and exhibitions, creative industries, etc.), but mostly it is an essential support for medium and long-term vision translated into strategies and policies for*

*cultural and artistic development. For the policy makers representatives, the central and / or local authorities, statistical data can be leveraged for the founding of strategic development policies in the cultural and occupational sector, as well as the culture and art education domain. For the general public, we provide a comprehensive analysis of the participation in the cultural act in its artistic manifestation, giving each reader the possibility to identify himself with a particular cultural consumer profile or to compare their own cultural practices with those of the general population. The term "cultural consumption" should be seen in the sense of frequency of reading, viewing television programs or performances, preferably for cultural products or services. The use of this term is appropriate in the context of culture savings, based on a certain supply and demand of cultural products and services dynamics pattern. Differences between artistic expressions led to the construction of two types of cultural activities. Under the term "elitist culture type" (or "high culture") the less accessible artistic expressions meet, which need extra training for their meaning and significance to be understood and therefore appreciated, valued. Theater, opera, ballet and museums are included in the elitist culture. "Mass culture" defines artistic expressions widely accessible, part of a consumer society and globalization. Within this category we include going to the cinema, entertainment shows and music festivals, local events, and concern for house arranging, clothing options, implications of a certain conduct and attitudes in relation to cultural and artistic products which are accessible to the general public.*

**Keywords:** *policy makers; cultural education; business administration; statistics*

**JEL classification:** Y.

Is the audience attending these cultural movements as a sponsor or just as a consumer? It is the first question that should start the cultural development strategy plan issued by the local government. Projects, events, artistic programs should be clearly dedicated to the audience desire/demand, as it should also fulfil some needs.

1. The proposed research is intended as a tool for professionals in the cultural and creative sectors, a relevant analysis for the central and local public authorities, but also a pleasant reading for the general public. A representative survey with the purpose to describe and analyse the cultural sector in Banat regarding the cultural consumption. Identifying the profiles of consumers / visitors / audiences, while also serving as an essential tool in cultural management. The study addresses the following issues: infrastructure for the distribution of cultural goods and services, cultural heritage, private cultural infrastructure, cultural capital, as well as the allocated consumption budget and the ways the population of Timisoara is spending its spare time.

2. The main objectives of the study are measuring the adequacy of the infrastructure for the distribution of cultural goods, adjusted to the needs of the population, consumption and cultural involvement measures, measuring the cultural needs of the population, identifying the preferences and cultural consumption behaviours, but also to ensure their coverage by specialized journalists. The study objectives are the achievement of a mapping / infographic of the cultural consumption in terms of infrastructure and consumption behaviors.



OB1. Identifying the art consumer profiles of the Timisoara region. Research questions that size up the objective of the present study are:

I.1 Which are the main population categories that consume or support art programs?

I.2 Is the audience a sponsor or a consumer?

I.3 Is the artistic product conceived according to the art consumers demand? What is the dynamic between supply and demand in terms of goods and services in the arts domain?

Art must be conceived to be consumed. There is much potential and there are many talented artists who are facing the problem of a little diversified public. In any creative industry of Romania, the issue of having an uneducated public is present. It is important to identify the gaps in a market, because those will transform into opportunities. Also, it's very important to read a lot about what is going on elsewhere, find some models and trends to follow. Nobody is reinventing the wheel: sooner or later we will catch up with the habits of the UK, but you should ensure yourself a know-how. In order to become an entrepreneur in a creative field, it is first necessary to be an entrepreneur, then creative. You have to combine the two aspects. It's hard for a creative person to also become an entrepreneur. Unfortunately in Romania the private companies still manifest little interest towards cultural / artistic projects - the balance unequally tilts towards projects with social stake. Balance is necessary for a very simple reason: if we don't care for our brains, we will end up needing permanent social assistance. The time has come for us to understand why we must invest in a society from a cultural standpoint as well. It's hard to grow the top of a pyramid if the base is poorly conceived. This is happening to us - we have a very small consumer base and therefore the tip, consisting of buyers, is situated at a very low level. In order to understand the "state" of our art market, it is enough to have a look at a real estate website in other countries. Over there you will see houses with walls covered by paintings and art photos, and no blank walls, by any means. Over here, art has not entered the dimensions of our everyday life. In order to help the development of the art market we must ensure an early education in art forms. We must begin to educate students, instead of simply waiting for them to finally meet the works by the likes of Georges Pompidou or Tate as their first contact with contemporary art. We need to tackle pupils and creative areas, we must find a way to promote exhibitions, museums, festivals and events in general, places and artistic phenomenon in a much better way than we do now. People are intimidated when confronted with the elitism and the sense of impermeability of a gallery; they are not comfortable entering into a gallery and asking for prices, they are unable to evaluate what is hanging from the walls to be 500 or 15,000 euros. And I can understand that, even when it comes to people who have financial means or the required space for it, it's just that there is a gap between the gallery and its audience, especially in Romania, where much of a gallery's public are actually artists and people working in the field, there are very few pure art consumers who are actually outsiders. That particular group of people is my subject of interest. Consumption culture of Romania, the odds of damage. There's a Cultural Consumption Barometer study conducted by the National Institute for Cultural Research and Training (INCFC) which claims to be the most important statistical analysis of the cultural sector in Romania, and the

results are downright astounding. 63% of the population never goes to the theater, 79.2% of respondents never visited libraries in order to read, 80.6% of the population stated that they don't attend musical events specific to the philharmonic activities, while 24% of Romanians consider that culture is "not very important". If we add the Eurostat data to these statistics, which indicated that in 2013 only 51% of the Romanian population had read a book in the past year, we obtain a picture of the culture consumption level in Romania which is not very flattering. Of course, there are multiple explanations for the Romanian's lack of appetite when it comes to forms of classical culture. Starting with the reduced weight of disciplines of the cultural-artistic curricula in the educational segment that addresses pupils of all levels, also half of the population living in poverty (according to INS / EUROSTAT) and concerning to cover their basic needs first, as defined in Maslow's pyramid, to the expansion of the Internet and new forms of assault concluding with the pseudo-culture specific to the consumerist companies, we will be able to find arguments in order to legitimize the Romanians cultural disinterest. To be noted here that a small amount of the population is aware about the possibility of redirecting a fragment of their taxes towards non-profit organisations. Of those who had heard about the 2% system (which enables people employed to forward 2% of their income tax wage and also companies to direct parts of their tax amounts to an NGO), the number of those who have actually accessed the program until now is only sizing up half of the population. Those who have directed their money were more focused towards organizations that complement areas with difficulties in operation and immediate need in healthcare, social services and education, or organizations functioning in areas that draw much of the public confidence (religion). Cultural experiences are important factors of cultural consumption. The present application aims to identify and analyze the factors influencing the dynamics of cultural consumption, such as frequency of "domestic" cultural consumption practices (use of television and radio, listening to music, reading media, written culture consumption); Frequency of the "public" cultural consumption practices (cinema, theater, museums, entertainment, festivals, participating in local celebrations); The frequency of other leisure practices (going shopping in the mall and hypermarket, attending sporting events, going on trips, playing sports, going to discos or clubs, walking in parks or green areas); The time budget (assigned to working, resting, various recreational activities etc.); People's attachment to values: the importance attributed to family, work, education, friends, leisure, money, religion. Socio-economic and demographic structure of the population: age, education, personal income, type of locality of residence. During communist times, the museums were part of the political education mechanism, where the role of teachers and schools has been active since the early stage of the cycle of nursery education. The decline, for various reasons, of the educational programs in the cultural-artistic field, at the beginning of the transition period, the lack of interest manifested by teachers and also financial and precarious economic situation led to decreased interest in culture and education. During this period, museums, cinemas, theaters and exhibition spaces began to suffer a dramatic lack of audience, many of them ended up changing their original destination or simply stopped hosting cultural and artistic events. Among other things, the crisis of visitors in native museums has emerged as an expression of freedom by individuals, including the freedom not to visit a museum, while public museums were associated by the public with a lack of mobility, a particular static culture type, or austere areas, which were removed from their daily life pattern.

OB2. Identifying the dynamics of mutual relations between public policy in the arts - public - artists domain, regarding cultural development strategy projects. Case Study, the Timisoara- Cultural Capital project.

In pursuing this specific objective, we start from the following research questions:

I.1 What are the forms of funding and investment in art? (The material aspect)

I.2 What are the forms of art education in the community? (The educational aspect)

Knowing the audience is a very important first step in the development of appropriate strategies and the achievement of the mission proposed by the organizers. An important issue is the media coverage of the cultural events, especially announcing them in as many different types of media as possible. Indeed, in many cases there is a causal relationship between financial possibilities of the Romanians and the access to quality culture. Tickets devoted to plays or famous opera performances usually have prices that are inaccessible to most citizens. The situation is even worse in the case of Romanians who can barely afford to pay their monthly bills and daily food basket. Equally true is that new forms of culture and the progress of new channels of communication in the virtual environment can be also invoked as unequal competitors for the classical forms of culture, especially since accessing them is free of charge, even though the actual content they provide is often superficial. On the other hand, to motivate the low interest in culture manifested by the Romanians only from such a perspective would create a slightly distorted image. Lack of financial resources can not be reliably invoked, as even if the budget does not allow someone to attend a play as a spectator, one can always attend a library in order to read a book as an alternative to a second-grade film that he would be watching sitting at home, in an armchair. Therefore, in my opinion, there's another obvious element interfering into the cultural consumption equation we discuss - convenience. Cultural behavior, in the most direct sense of spiritual cultivation, also depends a lot on the family development role. Without resorting to hasty generalizations, it is nevertheless a fact that most of our children do not read or read very little, and they only do that because they find themselves conditioned by the syllabus for the examinations. Maybe today's youth belonging to what is called the "emerging generation" is also to blame here, this being a pragmatic and goal oriented generation, but which is unfortunately very less leaning towards forms of culture that the previous generations grew up with. The domestic electronic network of cultural goods and cultural domestic consumption. The most spread goods of the physical domestic network are electronic devices: TV, mobile phone, radio. One possible explanation is the rapid development of technology and access to personal computers, the devices for tracking and processing of music and video images, especially the fulminant technological change, moving very fast from static machines to small-sized devices, becoming portable, mobile. For professionals working in the cultural and creative sectors, this research becomes an essential tool for the cultural programs and projects they run through, because of the detailed information they provide in each sector of activity (performing arts, national cultural heritage, museums and exhibitions, creative industries, etc.), but mostly it is an essential support for medium and long-term vision translated into strategies and policies for cultural and artistic development. For the policy makers representatives, the central and / or local authorities, statistical data can be leveraged for the founding of

strategic development policies in the cultural and occupational sector, as well as the culture and art education domain. For the general public, we provide a comprehensive analysis of the participation in the cultural act in its artistic manifestation, giving each reader the possibility to identify himself with a particular cultural consumer profile or to compare their own cultural practices with those of the general population. The term "cultural consumption" should be seen in the sense of frequency of reading, viewing television programs or performances, preferably for cultural products or services. The use of this term is appropriate in the context of culture savings, based on a certain supply and demand of cultural products and services dynamics pattern. Differences between artistic expressions led to the construction of two types of cultural activities. Under the term "elitist culture type" (or "high culture") the less accessible artistic expressions meet, which need extra training for their meaning and significance to be understood and therefore appreciated, valued. Theater, opera, ballet and museums are included in the elitist culture. "Mass culture" defines artistic expressions widely accessible, part of a consumer society and globalization. Within this category we include going to the cinema, entertainment shows and music festivals, local events, and concern for house arranging, clothing options, implications of a certain conduct and attitudes in relation to cultural and artistic products which are accessible to the general public.

OB3. The influence of mass media in the success of programs and cultural events.

I.1 What are the criteria for the selection of cultural events promoted by the media?

I.2 What role does the art journalist hold in the dynamic of cultural programs/events?

I.3 Do sensitive topics attract more promotion? Art by therapy.

Even if we talk about emerging artists, prices are at least a few hundred Euros. It's a delicate dance between artistic and monetary value. Many people have a problem in talking about art in terms of money / financial, they feel it diminishes the importance of the artistic act or the perception of a work of art, as a product with monetary value transforms the artistic act or a creative act in a purely mercantile action. Art is art, but it also pays, and this is nothing new. The media presents things as if they were a transaction on the stock exchange. There are many layers here, and I think the first concern of an artist or someone who exposes and promotes the artist is to make him popular and to attract interest, therefore the financial value becomes a secondary concern. The Internet is becoming the most important channel of distribution. The cultural products market is part of this new trend, consumers can read books or newspapers, listen to music or watch movies, can purchase art objects that they encounter in virtual reality and only see them on the TV screen or a smartphone. At the same time, more and more publishers and performing arts institutions have begun to create their own web pages, which facilitates consumer access to certain cultural products. In these circumstances, the use of the Internet and the analysis of web access by institutions and art promoters are indicators that reflect the cultural consumption. A very high percentage of the population is unable to appreciate the effects of artistic activities on social cohesion or the economy. Poor crystallization of public opinion on these issues suggests a low exposure to questions and debates concerning the role and importance of art to society as a whole. (Maria-Rosario Jackson - Study of the Support Structure for U.S. Artists). In today's society, the media plays a crucial role in social life, becoming, over time, an increasing and indispensable power, with a strong influence on society segments. Their active

presence can be felt on the financial level - banking, industrial developments in the evolution of technology, in politics, but also in everyday life. In a democracy, the media's role is to select information sources and data, to form opinions and attitudes, to comment and criticize, being considered "the vital center of public life". (Coste-Cerdan N., A. Le Diberder 1991, Television, Bucharest Ed.Humanistas). The industrial size of the mass communication has led to a "mass culture", which has resulted in cultural product standardization, simplified contents, the removal of intellectual dimensions in favor of affective attributes and enhancing economic criterion, based on profits. "Mass culture is not defined by the fact that it is the culture of the masses or that it is produced to be consumed by the masses, but that it lacks both reflective character, subtleness of the "high" social cultural and academical elite ", as well as it lacks the simplicity and concreteness of folk culture in the traditional society ". (John Storey, Cultural Theory and Popular Culture: An Introduction). The role of media is to get information and spread it. In addition, they are subject to a selection process, hierarchy and interpretation before being delivered to the public. Thus, the media provides a mediated image, a particular version of an event. Sometimes people get the message received as such, without examining or reflecting on it, due to the huge volume of information received every day. Media effects can be felt in different areas of society. The media can act upon: a) individuals, b) groups, c) institutions, d) the whole society; also, it can affect the human personality: cognitive dimension (changing the image of the world), affective dimension (creation or modification of attitudes and feelings) or behavioral dimension (changes the mode of action of individuals and social mobilization phenomena). From another perspective, the influence of the media can occur in a short period of time or may need, until it becomes operational, a wider range. Also the effects of the media can create desired as well as undesired changes: they can be the result of a controlled process (media campaigns) or of occurrences more or less unexpected. The media not only promotes behavioral patterns, but also generates new ones, such as the consumer pattern. Romanian media rarely mentions cultural events, therefore the manipulated teen does not give importance to these activities and even ends up being unable to understand them. In an era in which appearance is pursued greatly over essence, the poor content and layout of cultural activities alienate the youngsters. The very fact that different ideals are being promoted nowadays prompts investors to avoid risking their money by promoting culture, especially towards youngsters. Young people are not interested, therefore there would be no profit. Dedicated cultural magazines are less popular because they do not have good graphics, fine paper, layouts, they are presented in "miserable" fashion, and therefore unappealing to young people. Classical culture is overshadowed by most Romanian institutes.

### **Impact**

Amid poor coverage of social issues, but also by advancing the idea of the necessity of completing economic and social phenomena measurements with measurements of the dimension of cultural life, the development of cultural indicators was initiated in the 70's. Thus, towards socio-economic and cultural measurements conjugation, George Gerbner emphasized that by including cultural indicators, one can articulate public policies which are more appropriate to local or regional conditions. (Gerbner quoted by James Shanahan et al., "Cultural Indicators). A cultural and creative strategy of a city must be updated regularly and consistently, through further analysis

and through updating of quantitative and qualitative data, making proposals and specific development recommendations, so that it remains a viable work tool for both private and public cultural operators, creative entrepreneurs, public institutions and local governments.

### **Methodology**

In the form subjected to public consultation, the research involves an analysis of the local cultural life, culture and creativity as a lifestyle (diagnostics) and a suggested course of action for the coming years (Vision and Action Plan). Developing a strategy involves qualitative and quantitative research of various cultural and creative segments of Timisoara, in order to see the current state of each identified area, namely its potential for change and growth opportunities in the coming years. The document concludes with the proposal of a vision and an action plan in cultural and creative domains. The Action Plan is built on a Domino Effect-type structure at three levels: Transverse axis, Objectives and Actions which, through their appliance, lead to sustainable development of the city and problem solutions in successive manner. Cultural education is a basic necessary obligation, therefore the project will consist primarily in researching the cultural activity of the Banat area; information gathering in the first six months; preparing the forms for the presentation of the objective, surveys, questionnaires; analysis of the public need; content analysis on media articles; a brief description of current activities and impact measurement; audio-video documentation of the stages of investigation; interviews; organizing a workshop, public debate on the partial results of the covered activity (infographics). In the second part we try to promote other sources of cultural financing, obviously by reminding people of the existence of the 2% tax redirection program, or various other forms of tax deduction regarding cultural activity. Dissemination of results will be done by submitting articles / papers and scientific works which will be published / indexed in international databases, but also in a volume that will be launched with the occasion of a second, final workshop, where the obtained information will be forwarded to local institutions and regional policy makers.

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## THE INFLUENCE OF DEMOGRAPHIC ASPECTS UPON BUSINESS ETHICS IN ROMANIAN INDIVIDUALS

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**Abstract:** *The purpose of this research was to analyze the existence in Romania of a correlation between the level of business ethics and three variables (age, gender and background). In order to achieve this objective, we studied the scientific literature which tries to define ethics and business ethics, its characteristics, the elements which influence it. In the case study designed within this paper, the presence of business ethics as entrepreneurial quality in Romanian individuals is analyzed based on the data collected from the responses provided by 1460 respondents in a questionnaire. The variables refer both to the level at which business ethics is found in the behaviour of Romanians, and to their gender, age and background. The database thus put together was processed with the Microsoft Excel Programme and the statistics software SPSS (Statistical Package for the Social Sciences). The analysis shows that almost half of the respondents (43.56%) have a very high level of business ethics, being followed by those whose level of this entrepreneurial quality is high (29.11%). Those with an average level of business ethics represent 13.42%; 7.88% represent individuals with low level of business ethics, and 6.03% are those with a very low level of this entrepreneurial quality. Then we studied the relations between the occurrence of business ethics in the behaviour of the respondents and their age, gender and background. We carried out statistical tests which would support or reject the existence of some tighter or weaker relations between business ethics and the three variables. Of the three variables analyzed in relation to business ethics, it was proven that the latter is in correlation with all of them. This means that age, gender and background have a major contribution to acquiring this entrepreneurial quality. The results of this research can represent a major source of information for the political decision makers who have to implement measures for helping those living in rural areas, for supporting the youth, and for fighting gender-based discrimination.*

**Keywords:** *business ethics; entrepreneurial quality; Romania; age; environmental origin.*

**JEL classification:** *I25; L26.*

### 1. Introduction

Business ethics makes major contributions not only in the field of entrepreneurship, it is also a major determinant of social progress. Even though business ethics is often studied only in relation to entrepreneurship, this study makes a significant contribution to research in this area, due to the fact that it is reported to individuals in general, not taking into consideration their professional status.

Ethics is that behaviour which is morally acceptable as being “right” and “fair”, unlike the one considered “wrong” and “unfair” (Sims, 1992). Ethical values, attitudes and behaviours evolve under the influence of culture (Scholtens & Dam, 2007), the latter being defined as the collective programming of the mind (Hofstede, 2001). Yet the principles of ethics are not subjective gauges which vary according to culture, social or economic conditions (Hosmer, 1994). Business ethics represents an important quality of every entrepreneur.

This is precisely why, in this paper, we decided to analyze the manner in which age, gender and background influence business ethics. If, as regards culture, religion or spirituality, there are numerous studies which analyze the creation of the relation between these and the level of business ethics in the individuals’ personality, when it comes to gender, age and background (rural/urban), scientific literature contains few analyses. The novelty of this approach is also given by the referencing of this quality at the level of Romanian individuals.

In order to reach this objective, we will begin with examining the scientific literature available in this field, which tries to define ethics and business ethics, as well as identify their characteristics.

## **2. Literature Review**

Ethics is a systematic approach of the moral judgment based on reason, analysis and synthesis (Christie, et al., 2003). Ethical principles are basic rules which were proposed in order to ensure a “better society” (Hosmer, 1994).

Business ethics is the application of ethical principles to the issues which appear in the carrying out of businesses (Parboteeah, et al., 2008). In the literature in the field of business ethics, cultural differences are perceived as the main indicators which explain the variation in the actions of businesses (Mensah, 2014; Bodley, 2005). Despite the fact that there is a small number of universally acceptable ethical values, such as honesty or loyalty, their practical interpretations in business can vary amongst the various cultures (Smith & Hume, 2005).

A manager’s daily life is hectic, and thus they are often forced to make quick decisions, having little time for analyses and debates (Mintzberg, 1990). Despite these, the action should be preceded by thought (Mintzberg & Westley, 2001).

Business ethics has its own talisman words: conflict of interests, corruption, fraud, social responsibility of enterprises, and when properly used, these words help in the decision making process of more sensitive issues (Burg, 2009).

Business ethics can be defined as the collection of norms which are applied in a market that functions properly; these norms include various moral obligations (Shaw, 2009). Business ethics refers to the moral principles which define what is right and wrong in business (Ferrell, 2004).

At the same time, along history, specialists in business ethics were aware of the fact that achieving social objectives will be inefficient when economic objectives are prioritized (Arnold, 2010), thus they request change which would require a shift in the main objective of companies from generating profit to better living standards and social justice (Cragg, et al., 2012). Thus, even if the aim of any company is very simple, namely to maximize profit for the shareholders (Friedman, 1970), enterprises should be administered in such a way as to obtain a balance amongst the interests of all interested parties (Freeman, 1984). Furthermore, ethical practices have to be encouraged when it comes to the employment policy (Cozma Ighian, 2015).



Business ethics is considered a necessary pillar for business success (Tsalikis, et al., 2008). It has become an important request for the doing business on the world market (LeFebvre, 2011). This is why education in this direction is important. Education, training and continuous education have been supported by many authors (Rădulescu, et al., 2015). The chances of a manager reaching his/her goals increase with his/her participation in training courses (Zima, 2013). Companies where continuous professional development and overcoming one's own limitations are prioritized, have greater chances of success (Vele, 2013). Some authors even recommend partnerships with educational institutions in order to develop educational programmes which would benefit both parties involved (Pop & Borza, 2016).

Research has shown that business schools should also focus on ethical education; this is supported both by researchers in the university environment (Evans & Weiss, 2008) and by students (Ditlev-Simonsen & Midttun, 2011). But can ethics be learned?

There are authors who consider that ethics cannot be taught because the development of character is considered to have been completed before college (Cragg, 1997). Yet most theoreticians suggest that ethics can be learned efficiently (Sims, 2002). Empirical studies have proven that introducing an ethics-related component in the classroom can often lead to an improvement of ethical sensitivity, of the sensitivity to moral reasoning and even ethical behaviour (Loe & Weeks, 2000; Lowry, 2003).

Yet a reasonable compromise between the two extreme positions is to suggest that learning ethics can be achieved only by those individuals who are already prepared to consider ethical strategies and moral values (Cragg, 1997).

Ethics in business can be defined as a form of applied ethics that analyzes rules and principles in a commercial context; the various moral or ethical issues that can arise in a business environment; and all special duties or obligations that apply to persons who are engaged in business (Christensen, Peirce, Hartman, Hoffman, & Carrier, 2007).

### **3. Research Methodology**

The presence of business ethics as entrepreneurial quality in the personality of Romanian individuals is analyzed based on the data collected from the responses provided by 1460 respondents to a questionnaire. The database consists of individuals belonging to all regions of the country, from both urban and rural areas. The sample thus created is representative, having a 95% level of trust and a maximum admitted margin of error of 2.6% in rapport to a total population of approximately 16 million Romanians over 18 years of age, the age at which they are considered adults, and the qualities are considered to have already settled in their character and no major changes might occur. The question that analyzes the level of ethics presence in the personality of individuals (To what extent do you consider the moral norms besides the legal ones to reach your goals?) and those studying age, gender and home environment were included in the survey which became the foundation on which the database was created.

It should be noted that the answers to the question regarding the level of ethics are measured on a scale of 1 to 5 where 1 represents the lowest level and 5 the highest level.

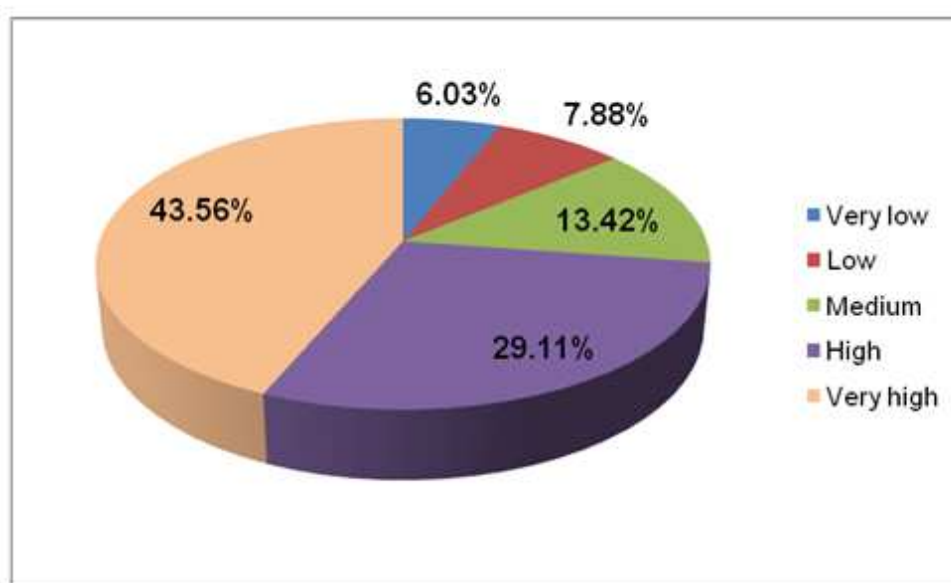
The questionnaire was given to the respondents disregarding their social status or the fact that they were entrepreneurs or not, because studying this entrepreneurial

quality can offer clues about what can inhibit/encourage Romanian individuals to start their own business. The survey was developed on Google Forms platform, and it was applied online using Facebook's social network.

The studied variables refer both to the level to which business ethics is found in the behaviour of Romanians, and their gender, age and background. The database thus created was processed with the Microsoft Excel Programme and the statistics software SPSS (Statistical Package for the Social Sciences).

#### 4. Results and Discussions

For starters, it is very important to analyze the level of business ethics as entrepreneurial quality which characterizes the group of respondents. The five levels of business ethics and the percentages of individuals who hold each of these levels are presented in figure 1. One can easily notice that almost half of the respondents (43.56%) have a very high level of business ethics, being followed by those whose level of this entrepreneurial quality is high (29.11%). Despite all these, those who have an average level of business ethics are represented only by a percentage of 13.42%; this is not an insignificant number, especially in rapport to the size of the sample group. It is noteworthy that as the level of business ethics decreases, the number of respondents who represent these levels also decreases, thus we reach 7.88% in the case of individuals with a low level of business ethics and 6.03% in the case of individuals with a very low level of this entrepreneurial quality.



**Figure 1:** Representation of individuals at every level of business ethics

Table 1 describes descriptive statistics of quantitative and qualitative variables, namely business ethics and respondents' age. As expected, business ethics have a minimum of 1 and a maximum of 5, averaging 3,963. Age related, the youngest respondent turned 18, while the oldest is 68 years old and the average has a value close to 32 years.

Scale variables possess a much lower standard deviation in business ethics (1,194) compared to the one correspondent to the age of respondents (12,054).

The negative value of the Skewness coefficient calculated on the business ethics variable reveals that we have a negative asymmetric distribution that is oblique to the left. This phenomenon occurs because the median value (parameter dividing the observations into two equal parts) is higher than the mean value. The situation changes when it comes to age because the variable has a positive value of the Skewness coefficient, which means that the series is asymmetric positive and that the median is lower than the average. Both studied variables have positive coefficients of the Kurtosis coefficient leading to the conclusion that we have leptokurtic distributions that have a high "hump".

**Table 1:** Descriptive statistics

	Business ethics	Age
Mean	3.963	31.952
Median	4	28
Std. deviation	1.194	12.054
Variance	1.427	145.321
Skewness	-1.075	0.985
Kurtosis	0.169	0.013

Further we wanted to study the relation between the presence of business ethics in the behaviour of the respondents and their gender, age and background. We need to identify the manner in which these variables influence the development of business ethics. Due to the fact that the variables which describe gender (male and female) and the background (urban and rural) are nominal, in order to analyze the correlation between these and the level of the presence of business ethics, we have applied the Chi-square test presented in table 2 and in table 4 respectively. Both tables are made up of the Pearson coefficient, the likelihood ratio, the number of degrees of freedom and the Sig values.

As regards the number of degrees of freedom, these are 4 in both situations because the variable which describes the level of business ethics is ordinal, created on the basis of the responses given on a scale from 1 to 5, and 4 (5-1) represents the number of independent comparisons done within this variable. The identification of the correlations studied in table 2 and in table 4 are achieved by comparing the Sig value with the chosen significance threshold, this being generally 0.05 in statistical research.

**Table 2:** The Chi-square test which analyzes the relation between the level of business ethics and the individuals' gender

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.198	4	0.010
Likelihood Ratio	13.180	4	0.010

After carrying out the comparison in the two tables, we can confirm that there are correlations between the level of business ethics and gender (Sig = 0.010 < 0.05),

as well as with the individual's background ( $\text{Sig} = 0.000 < 0.05$ ). As regards the value of the Pearson coefficient, which in the former case is 13.198 and the latter case is 20.264, one can confirm that these relations are significant.

The situation changes in table 3 where we analyzed the correlation between the level of business ethics and the age of the individual, because we used the Spearman coefficient for the test. The decision to use this coefficient was made after analyzing the types of variables used; while the variable which presents the level of business ethics is an ordinal one, the one which describes the age of the respondents is a quantitative one. The interpretation of the results is carried out in the same manner as in the previous cases, namely by comparing the Sig value between the level and business ethics and the age of the respondents to the chosen 0.05 significance threshold.

**Table 3:** The Spearman correlation coefficients which analyze the relation between the level of business ethics and the age of the individuals

			business ethics	age
Spearman's rho	business ethics	Correlation Coefficient	1.000	0.094**
		Sig. (2-tailed)	.	0.000
	age	Correlation Coefficient	0.094**	1.000
		Sig. (2-tailed)	0.000	.

\*\* Correlation is significant at the 0.01 level (2-tailed).

The output of the statistical test in table 3 is, in fact, a matrix of the correlations where the items under the diagonal are repeated, while the diagonal takes the value 1 because it analyzes the correlation between the same variables (age-age and gender-gender respectively).

**Table 4:** The Chi-square test which analyzes the relation between the level of business ethics and the individuals' background

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.264	4	0.000
Likelihood Ratio	19.104	4	0.001

Following the above, in order to analyze the correlation between the level of business ethics and the age of the respondents, we will use only value 0.000 of Sig which, compared to the value of the significance threshold, shows that there is a correlation between the level of the entrepreneurial quality and the age of the respondents. Moreover, the positive value of the Spearman coefficient (0.094) shows the existence of a direct correlation which generates an increase of the level of business ethics as the age of the individual increases.

We aim to extend the research and investigate to what extent the gender and home environment influences the development of ethics in the personality of individuals. To obtain this, we transform the nominal variables (gender and home environment) into ordinal variables where 0 represents the male gender from the rural environment, and 1 represents the female gender from the urban environment.

Following the computations of the Spearman's correlation coefficient, women tend to have higher levels of ethics than men (Spearman's coefficient is 0.086 and Sig value is 0.001 <0.05). After applying the Spearman's non-parametric test on ethics and home environment, we can say that the urban environment exerts a positive influence on the development of this entrepreneurial quality (the coefficient is 0.066 and Sig is 0.011 <0.05).

## 5. Conclusions

The concept of business ethics is relatively new in Romania, a country where the communist cultural inheritance can still be felt. Romania's joining the European Union in 2007 has created many opportunities for businesses in Romania, as well as in the field of research, thus those wishing to become successful entrepreneurs in Romania have a range of models and sources of inspiration available.

In an unpredictable economic environment under continuous development, entrepreneurship means taking chances during the entire process of carrying out these activities. Thus, the decision to initiate a business can be an easy process, yet what follows proves to be slightly more difficult, and this is why the individual need to be aware of whether he/she has certain entrepreneurial qualities meant to help him/her in carrying out the desired actions. If the individual has low levels of several entrepreneurial qualities identified by researchers, it would be wiser to wait for a while before starting a business, and use this time for training and gaining experience, otherwise the likelihood of failure would increase significantly.

This research reveals that more than half of the population of Romania adopts ethical behavior when engaging in a business, whether they receive economic or other benefits from this business. Also, this type of behavior is influenced by the gender, age and individual's background.

Of the three variables analyzed in relation to the level of business ethics, it has been proven that this entrepreneurial quality is in correlation with all of these. This means that an individual's age, gender and background have a major contribution in acquiring this entrepreneurial quality.

The outcomes of this research can be an important source of information for the political decision makers who have to implement measures meant to help those living in rural areas, support the youth and fight gender-based discrimination.

A possible extension of this research is the relation between business ethics, the historical regions and the economic development of Romania. It is also possible to investigate the links between business ethics and other entrepreneurial qualities (examples: risk taking, innovation, commitment, punctuality, etc.).

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# THE EVOLUTION OF THE ROMANIAN LABOUR MARKET BETWEEN 2000-2016. A STATISTICAL REVIEW

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**Abstract:** *In this work I present and summarize the negative effects and manifestations of contemporary economic and financial crisis both on the national economy and on society. The reason why I chose this topic is to take a close look at the economic crisis (started in 2008 in the US) – and its financial effect on contemporary economy. This article presents recent statistics in Romania with regard to employment, including an analysis based on the dimensions of socio – economics: statistics evaluating employment show significant differences by gender, age and area. The purpose of this paper is to study and analyse the evolution of the Romanian labour market between 2000 and the first quarter of 2016 from statistical points of view based on the results of a comparison of the period before the crisis and after it. This paper emphasizes the correlation between real GDP growth and unemployment rate, as described by Okun's law. The theoretical background of my scientific research methodology used to accomplish this work is based on macroeconomic principles and theories, such as recent statistical data taken from the official website of the National Institute of Statistics, the Romanian National Bank, Ministry of Labour and Eurostat. The economic crisis of 2008 has reinforced some existing imbalances on the Romanian labour market, requiring additional efforts to find solution for this problem. In the last 15 years the Romanian labour market has undergone profound changes. We can distinguish two stages regarding developments on the labour market in Romania after 2000. The first stage comprises the period 2000 – 2007, and is defined as a period of profound restructuring of the Romanian economy. The second period, from 2007 up to the present. is one that is characterized as a period of relatively high unemployment rate and efforts were directed primarily at limiting unemployment and its harmful effects on society. After 2005, employment development is moving towards a new crisis on the labour market, but its cause is not unemployment, but rather a decrease in demand on the labor market.*

**Keywords:** *Romanian labor market; crisis; unemployment rate; evolution; statistical analysis; Okun's law.*

**JEL classification:** *E24; E29; C10.*

## 1.Introduction

Unemployment can be considered a global macrosocial flow generated by causes that have to be the economic situation of users, or the status of tenders for work. On the one hand the emergence of unemployment, on the other hand, its maintenance and alteration represent aspects that may be considered only in connection with the real system of market economy. Reality has shown that the labor market is a dynamic market, employment tenders entering and exiting from unemployment with a remarkable rate, which helps us to an explanation and more profound



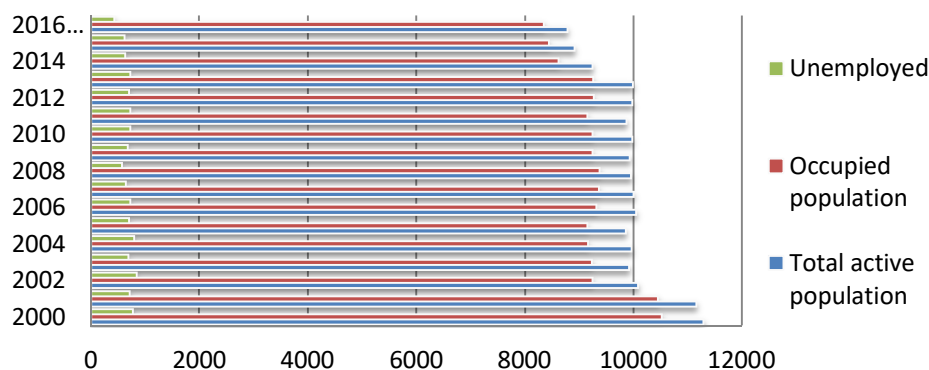
understanding of the phenomenon of unemployment. (Gogonea R.M, 2009, pp.116). A high unemployment, and involuntary, will lead to a phenomenon that labor markets do not work like other markets. Imbalance resulted should have an alternative that would create a balance between demand for labor by firms and the demand for household work. This creates the possibility to stabilize the unemployment rate. As a relative dimension of the phenomenon, the unemployment rate is calculated as the ratio between the mass percentage of unemployment (average number of unemployed) and one of reference parameters: *active population, active available population, engaged population plus unemployed, employed population*. Unemployment measurement is necessary to develop policies and strategies to mitigate this phenomenon, of employment, in correlation with actual and future state of the national economy (Badulescu 1997, Badulescu 2006, Badulescu and Badulescu 2008, Burda and Wyplosz 2002). Until 2000, Romania had a very irregular transition, especially due to the discontinuity of political reforms. Romania's economic growth can be explained mainly by increasing domestic consumption and foreign investments. Increases in consumption do not lead to economic growth on medium and long term without increases in production and productivity. Romania's economic growth revealed the first signs of fragility right after its accession to the EU.<sup>1</sup>

## **2.The evolution of the Romanian labour market between 2000 – 2016 II. quarter**

The diminishing number of persons employed in Romania was caused especially on the basis of reduced number of employees in Romania. In the time of strong economic restructuration, the number of employees was significantly reduced in Romania from 9 millions to 4.7 millions. The unemployment in Romania hasn't increased accordingly as a result of the legal and illegal immigration. Following this, at present over 2 millions Romanian citizens are working abroad, in accordance with some unofficial statistics. The migration phenomenon was accelerated in the last 3 - 4 years before Romania officially joined the European Union. Further more economic development and changes in the age structure of the population have been changes in the structure of the economically active population (employed and unemployed). Thus, if in 2002 the share of unemployed in the total active population was 11.2%, in 2011 this share drops to 7.3%. As a results is the fact that the share of active population in total population increased from 40.8% to 45.6% from one census to another. In 2014, the economically active population of Romania was 9242.4 thousand persons, of which 8613.7 thousand persons employed and 628.7 thousand unemployed. Between 2015 - 2016 II. quarter the evolution of the active population and the unemployed population shows a significant downward tendency. At 1 January 2015, the active civilian population amounted to 8 910 000 persons, representing 44.9 % of the country's total population. Out of the total active population, 53.4 % were men and 46.6 % were women. (European Commission, 2016). Romania's seasonally adjusted unemployment rate decreased to 5.7 percent in November of 2016 from 5.8 percent in October. It was the lowest jobless rate since September 2008, as the number of unemployed fell to 521 thousand from 522 thousand in October.

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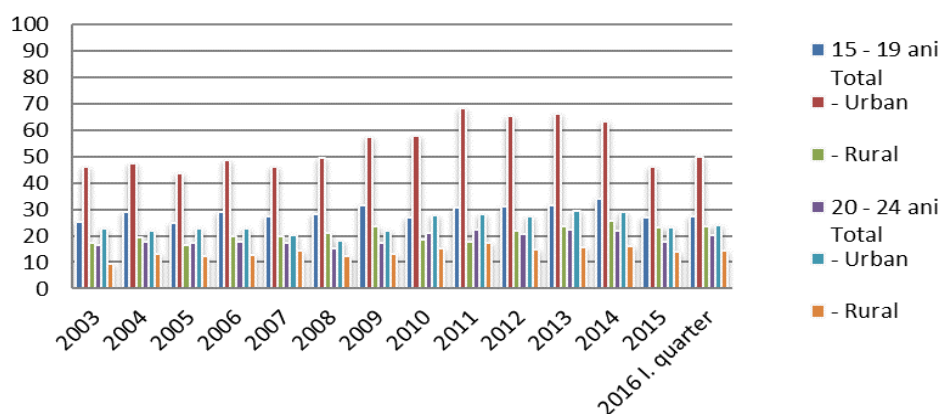
**Figure 1. Evolution of unemployment in urban and rural areas – by age, between 2003 – 2016 II. quarter (thousands persons)**

Source: made by author based on the data provided by National Institute of Statistics available on site: <http://statistici.INSSE.ro/shop/?lang=ro>, accessed on 12.01.2017

Unemployment went down for both men (6.5 % from 6.6%) and women (4.7 % from 4.8%). A year earlier, the jobless rate was higher at 6.7%. Unemployment Rate in Romania averaged 6.83 % from 2006 until 2016, reaching an all time high of 8.10 % in March of 2010 and a record low of 5.40 % in September of 2008.

### **3. Evolution of youth unemployment area by regions between 2003 – 2016 I. quarter**

The youth unemployment rate is significantly higher than the national unemployment rate. It recorded a peak in 2009 with a rate of 20.8%. In 2008, 17.5% of young people aged between 15-24 years of left school early. Therefore in the absence of urgent action to mitigate dropout, Romania may face with an increased number of young unskilled labour force in the future (Figure 2). During 2004 – 2014, the economically active population decreased substantially, with a reduction of more than 700 thousand persons in 2014, compared to 2004, as consequence of the downward trend and changes in the structure of the population by age. Analysing the period between 2010 – 2015 the growth in the total number of young people between 15 – 19 years in urban and rural areas shows a rising tendency in 2011 over the previous year from 27.1% to 30.7%. In rural areas there is a tendency of decrease in the two periods analysed from 18.6% to 17.9%. In 2010 the relative poverty rate in rural areas was 27.1% as compared to 9% that was registered in urban areas and to 17.2% relative poverty rate nationally. The spread between the two rates of unemployment was 0.9 percentage points (7.1% for men versus 6.2% for women), while the residential 1.9 percentage points (7.6% for urban areas compared to 5.7% for rural areas).

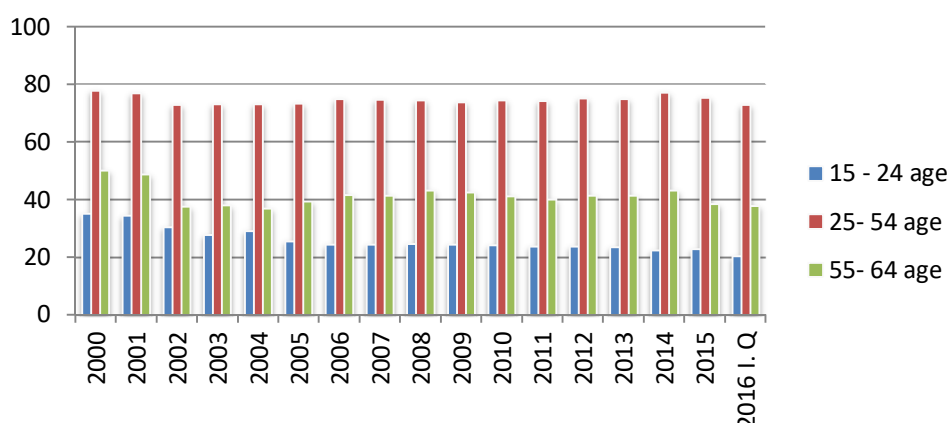


**Figure 2. Evolution of youth unemployment in urban and rural areas – between 2003 – 2016 I. quarter (%)**

Source: made by author based on the data provided by National Institute of Statistics available on site: <http://statistici.insse.ro/shop/?lang=ro>, accessed in the 15.01.2017

### 3. Employment rate in Romania, by age, between 2000 – 2016 I. quarter

Figure 3 presents further developments in the employment rate in the age categories Romania between 2000-2013, the largest category recorded an occupancy rate of between 25 – 54 years, the employment rate is more than 70%. Age group between 55 – 65 years is on second place, registering an occupancy rate of about 50% between 2000 – 2001 and about 40% during 2002 – 2013.



**Figure 3. Evolution of unemployment – by age categories, between 2003 – 2016 I. quarter (%)**

Source: made by author based on the data provided by National Institute of Statistics available on site: <http://statistici.insse.ro/shop/?lang=ro>, accessed in the 28.12.2016

The lowest values were recorded in the period 2002 – 2005 when the employment rate was below 30%. The evolution of the employment rate between 2009 – 2015

shows a significant downward tendency between 2009 – 2013, thanks to the negative effect of the economic and financial crisis. In 2014 the employment rate indicators begin to rise compared to the period under review, from the age group between 25 – 54 years to 77.1% respectively for the age group 55 – 64 years to 43.1% based on the total number of the employed population, 2015 shows a decreasing tendency on all age categories.

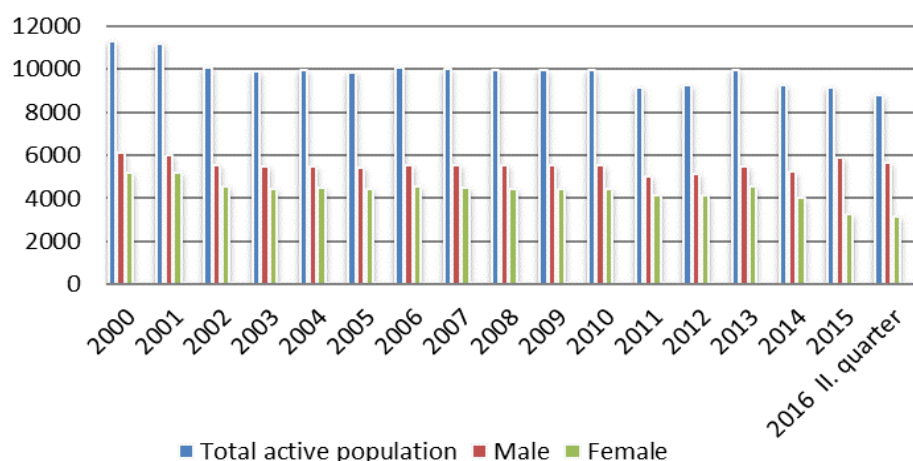
The employed civilian population amounted to 8 431 700 people, of whom 4 900 700 were salaried employees. Most of the employees were working in the services sector (3 014 500 people), while 1 772 400 persons were employed in the industrial and construction sectors. The number of employees in agriculture, forestry and fisheries was 113,800.

In the third quarter of 2015, the employment rate of the working age population (15-64 years old) was 63.2 %, with a higher rate for men (71.6 %, compared to 54.6 % for women). In December 2015, this rate was 6.7 %, according to the INS press release of January 2016. (European Commission, 2016)

#### **4.The evolution of the active population, grouped by gender between 2000 – 2016 II. quarter**

A characteristic feature of the economically active population in Romania, as in most EU Member States, is that the majority of the population is male. In Romania the number of the active population has decreased in the period between 2000 – 2005 with 1432 persons (12,7%).The employed population was reduced with 1361 persons and the number of the unemployed with 71 persons. It is important that the reduction of the active population was mainly produced in the rural environment (1445 persons) while the active population from the urban environment grew with 13 persons. The reduction of the active population was produced mainly among the female population (774 persons) – 54,1% from the total. During 2004 – 2014, the male economically active population was always higher than female population, with shares ranging between 55.2 % (in 2004) and 56.7 % (in 2009). The ratio between male and female economically active population, in 2014, was 1,3. Most of the economically active population lives in the urban area. The largest difference between the two residence areas was 10.8 percentage points in 2006, while the lowest was 6.4 percentage points in 2008. The activity rate for the population of 15 years and over was 54.9 % in 2014, 1.3 percentage points less than ten years ago. For persons of working age (15-64 years), the activity rate was 65.7 % The reduction of the active population was produced mainly among the female population (774 persons) – 54,1% from the total. As a consequence the activity rate (the percentage report between the active population and the total population) was reduced by 68,8% in 2000 and 62,4% in 2005.

The employment rate was reduced by 5,9% especially in the rural environment, where the employment rate went down from 73,8% in 2000 to 61,6% in 2005.The unemployment rate had an oscillating tendency and in the period between 2002 – 2005 it was reduced from 8,45 to 7,2% this fact being explainable with the economic growth that took place in this period. Between 2010 – 2013 we can trace a sharp downward tendency in the total number of active population due to the negative effects of the economic crisis. In 2010 the total active population was 9.965 and between 2011 – 2012 this figure fell to 9,100 people of which 56% men and 44% women.In 2013 a certain level of economic regeneration was taking place that leads to employment growth with a value of 9.977.



**Figure 4 Evolution of the active population by gender, 2003 – 2016 II quarter (thousands persons)**

Source: made by author based on data available on: <http://statistici.insse.ro/shop/?lang=ro>

Analyzing the period between 2014 – and the first quarter of 2015 we see a downward tendency as compared to the previous year, from 9977 active people (2013) to 9,240 people in 2014 of which 56,58% men and 43,45% women. (National Institute of Statistics, 2014). As of the division of the employed population by occupation in 2012 indicates that the largest share in total employment was held by workers skilled in agriculture, forestry and fishing (28.8%). Between 2000 – 2003 the total number of active population started to decline from 11 283 to 9915 persons (of which 53% male and 47% female). Between 2004 – 2006 the number of active population began to increase as compared to the previous year from 9915 to 10 041 thousand, and from 2007 to 2009 is a downward trend from 9994 thousand to 9924 thousand persons (of which approximately 55% men and 45% women).

##### **5. Analysis of the correlation between GDP and unemployment rate in Romania during 2000 – 2016 I. quarter**

The starting point is Okun's Law<sup>2</sup>, in the sense that it wants to conduct an analysis of the correlation between the Gross Domestic Product (GDP) and the unemployment rate, based on the statistical data from Romania. Unlike the indicators taken into account by the above – mentioned law, in order to define the unemployment rate so both the Gross Domestic Product and the unemployment are measured the same. (Table 1)

We have used data for real Gross Domestic Product (GDP) growth and unemployment in the period 2000 – 2016 I. quarter. The source of the data is The National Institute of Statistics, the frequency is quarterly and all the series have been

<sup>2</sup> In economics, Okun's law is based on empirical observation of the relationship between the unemployment rate and the growth rate of the GDP

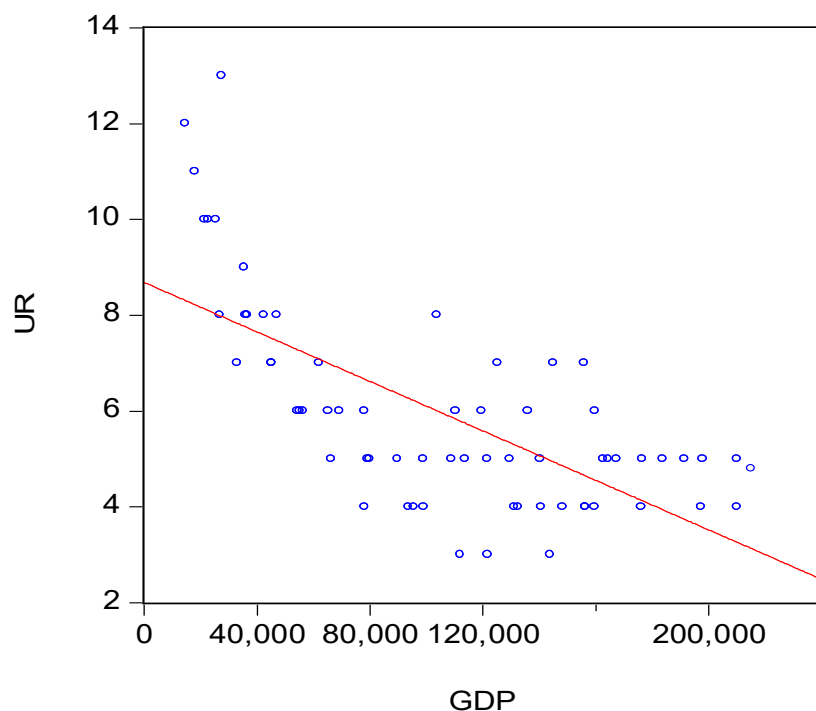
seasonally adjusted. We have a period defined by a great economic instability in the first years: *increased unemployment and Gross Domestic Product decrease, followed by a longer period during 2000 and 2008 when the real Gross Domestic Product growth rate had an increased evolution, while the index of the unemployed persons dropped constantly*. 2008 was the year when the global financial crisis effects reached our country as well, manifesting themselves first on the labor market, then, after eight years of a decreasing number of unemployed persons, the indicator increased as regards the previous year.

**Table 1. Evolution of GDP growth and unemployment rate in Romania during the period 2000-2016**

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
GDP growth variation	102,4	105,7	105,1	105,5	108,3	104,2	107,9	106,3	107,3
Unemployment dynamics (%)	11,17	10,98	10,18	7,59	6,78	5,83	5,43	4,34	4
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
GDP growth variation	107,3	106,6	101,1	102,3	100,6	102,6	103	103,5	104,8
Unemployment rate (%)	4	6,29	7,61	5,4	5,59	5,65	5,84	5	4,8

Source: Data taken from the Romanian Statistical Directories published by the INS, editions: 2001 - 2016

The mathematical relationship that expresses the function between variables has the form:  $Y = a + bx$  (1). To determinate the average regression equation and with its help to estimate the theoretical values, it is necessary to determine the values of the two parameters "a" and "b" for the regression function, using The Least Squares Method. The parameter "b" for the regression function (the regression coefficient) shows the slope of the straight line, showing the influence degree of the factorial parameter. Its positive or negative value indicates in which sense the relation is effectuated. The intensity of the linear connection between indicators can be obtained by applying the correlation coefficient. We refer to the influence of unemployment on gross domestic product and on the other way, to the influence of gross domestic product on unemployment. Two cases will be treated further: *the existence and the form of the linear correlation between unemployment dynamics and GDP growth it was verified. GDP was considered as independent variables*. Figure 5 presents a scatter plot for the rate of unemployment and Gross Domestic Product in Romania during 2000 - 2016. The graph suggests that higher values of economic growth can be associated with lower values of unemployment growth rate (a downward trend can be identified). The second step of the analysis is to create a graph using historical values for real Gross Domestic Product and the actual rate of unemployment. We have a linear indirect (negative) relationship. The calculations in Table no.2 prove that there is a negative correlation between the two variables because the result is negative.



**Figure 5. Scatter plot for the unemployment rate and GDP in Romania between 2000-2016**

The value of  $R = 0.466080$  allows us to observe that there is a moderate connection between the GDP and unemployment rate. The determination value ( $R^2$ ) has a value of 0.457737, indicating that 45,7% from the variation of the unemployed number can be explained by the evolution of the gross domestic product, Test F allows establishing the role of the independent variable in explaining the evolution of the dependent variable. The value of  $F_{calc} = 55,86 > 3,96 F_{tabelar}$  which means connection between the two variables, shows that the model is valid and can be used in analysing the relation of variables.

After the calculations, the values of the two parameters were determined:  $a = 213614.0$  and  $b = -18053.87$ . The intensity of the linear connection between the total number of registered unemployed and Gross Domestic Product (GDP) can be obtained by applying the correlation coefficient. Its value is 0,46 which means a medium relation between indicators. Therefor, its negative value indicates an inverse relationship between the two indicators, as we noticed from the graph representation. Once established correlation function between two indicators can predict values of the dependent variable. The relationship is valid if other influencing factor does not change. Given that 2008 was the year when the financial crisis have been felt throughout the economy, we looking for how the two indicators would be developed if this phenomenon did not exist. The coefficients of the model are significantly different of 0 (the Student test,  $T_{calc}(1) = -7.474498 < 1,96 t_{tabelar}$ ,  $T_{calc}(2) = 14.02048 > 1,96 t_{tabelar}$ ). The free term ( $a$ ) of 861081,6094 represents the value of the dependent variable when the independent variable is zero. The GDP value of the variable ( $b$ ), having the value of -0,7474498 is negative and shows the

existence of an inverted connection between the two values. After the calculation, we can present the unifactorial linear model:  $y_i = 213614.0 - 0,7474498x_i$ .

**Hypotesis no. 1**, which reffers to the fact that there is an inverse ratio connection between economic growth and unemployment, is correct.

**Hypotesis no. 2** reffers to the fact that there is a moderate connection between the evolution of the economic growth and the evolution of the unemployment, is correct.

**Table nr.2 Least Squares Method**

Dependent Variable: GDP

Method: Least Squares

Date: 01/30/17 Time: 19:42

Sample: 2000Q1 2016Q2

Included observations: 66

Variable	Coefficien	t	Std. Error	t-Statistic	Prob.
UR	-18053.87	2415.395	-7.474498	0.0000	
C	213614.0	15235.86	14.02048	0.0000	
R-squared	0.466080	Mean dependent var			106439.7
Adjusted squared	R-0.457737	S.D. dependent var			56828.87
S.E. of regression	41847.92	Akaike info criterion			24.15131
Sum squared resid	1.12E+11	Schwarz criterion			24.21766
Log likelihood	-794.9931	Hannan-Quinn criter.			24.17753
F-statistic	55.86811	Durbin-Watson stat			0.487045
Prob(F-statistic)	0.000000				

We can find a huge difference in the early years, when the crisis began and in the period 2010 - 2012 this difference decreased. The existence and the form of the correlation between unemployment dynamics and Gross Domestic Product growth it was verified. Unemployment was considered the independent variable. The others statistics (DW = 0.48, F-stat = 55,86) let portend a good fitting. The Durbin-Watson statistic is around 0,48 which means that there is autocorrelation in the residuals.

### Conclusions

Unemployment in itself can be regarded as an economic phenomenon that is the result of an imbalance balance labor, labor demand overcome by the offer. In this paper I analyzed statistically evolution of indicators to determine the extent to which they have been affected by the economic crisis – financial. In Romania analyzing labor market in the period 2000 – 2013 can be seen that the total number of active population starts to decline from 11 283 thousand to 9915 thousand persons, of which 53% are men 47% are women. We can see that the number of active



population declined more among men in that economic and financial crisis has affected the areas where they worked mostly men, such as construction, manufacturing, automotive, wood and fabric. Regarding the evolution of Romania's total population can speak during the years 2002 – 2011 by a downturn in total population due to natural increase and negative values of the external migration of the population. The maximum value being recorded in the years 2000 – 2001 of 22.4 million people and the minimum values were recorded between 2012 – 2013 of 21.292 million people. Factors, such as, informal economy, international migration, high share of people working in subsistence agriculture, have maintained low rate of unemployment, in spite of low employment rate, because of the low activity rate.

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## **A SHORT ANALYSIS OF THE FORMS OF SUSTAINABLE TOURISM PRESENT IN SELECTED CENTRAL AND EASTERN EUROPEAN COUNTRIES**

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**Abstract:** *The tourism industry has become one of the most important components of the world economy. It generates significant incomes and it employs millions of individuals worldwide. However, in the last three decades, arguments were made for the negative impacts of the tourism industry in specific destinations. These negative impacts include: pollution, destruction of habitat, deforestation, financial leakages etc. Because of these, sustainable tourism emerged as an answer to these problems. Its principles are based on protecting the environment and local culture and spreading the wealth among all stakeholders. During this period of time, several forms of sustainable tourism began to take shape and became important promoters of sustainable tourism: ecotourism, volunteer tourism, slow tourism and many others. In the present paper we will take a look at how these forms of sustainable tourism are present in six central and eastern European countries: Bulgaria, The Czech Republic, Hungary, Poland, Romania and Slovakia. Of course, our main focus will be Romania, and the way it matches up with its neighbouring countries. Among others, we will try to identify the challenges and issues these forms of tourism face in these countries and also what are the opportunities for the near future. The shortcomings of the paper are related to the lack of statistical data on national and international websites.*

**Keywords:** *ecotourism; volunteer; tourism; sustainable; slow.*

**JEL classification:** *L83; A13.*

### **1. Introduction**

Sustainable tourism has its roots in sustainable development, which represents one of the main focuses of both academic and business circles. (Bramwell and Lane, 1993; Butler 2000; Rosca, 2017)

Sustainable tourism, as an antithesis to classical, mass tourism, has some forms of its own. Even if coastal, business or cultural tourism can respect the principles of sustainability, the forms of sustainable tourism are the practical models of sustainable tourism under certain conditions.

There is a debate about: which came first - sustainable tourism or its forms?, but we have included them under the sustainable tourism dome because they respect its principles, focusing on one or more of them.

In the contemporary literature there are many forms of tourism that respect the principles of sustainable tourism. Weaver (2002) believes that sustainable tourism took on many forms over time:

- farm based tourism, the oldest form of sustainable tourism;
- volunteer tourism;
- guesthouse tourism;

- backpacking;
- alternative urban tourism;
- educational tourism.

International tourism was important for the countries of the region during the communist era, and in most cases it was administered by state institutions. But there has not been much emphasis on environmental protection, an attitude that has changed with the collapse of communist regimes (Hall, 2000: 446, Balteanu et al., 2011: 256). Some constraints have persisted in some cases for the implementation of effective environmental protection policies:

- Poor application of environmental legislation;
- Uncertainty about taxation;
- Incorrect information about environmental damage and related costs.

Central and Eastern European societies have numerous and diverse cultures that present a wide range of opportunities (Morutan and Badulescu: 2016) for new generations of high income tourists (Nistoreanu and Ghereș 2010: 1). Consequently, sustainable tourism will be even more difficult to implement in the region, faced with many challenges from the partners involved. Below we presented the potential of a range of forms of sustainable tourism in order to have a correct picture of the importance of implementing sustainable tourism principles in the domestic tourism.

In the present paper we have focused on four of these forms of tourism and their success or lack of it in Romania and other Eastern European countries.

## 2. Ecotourism

This form of tourism is practiced in protected areas and nature reserves, which are important tourist attractions (Cosmescu and Cosmescu, 2007: 67). In this context, Romania has protected areas totaling 9348478 ha, which is approximately 4,5% from the total area of the country.

As we can see, national parks and natural parks play an important role for the six selected countries, with significant total areas. Romania doesn't come close to the results of the other countries, which may suggest that there is potential - areas - that can be transformed into protected areas, or existing ones which can be increased. Figure 1 shows the most important national and natural parks in Romania, taking into account the number of tourists who visited them.

According to some studies (Mihai, 2009; Năstase, 2011) there is a growing interest in ecotourism at national level. Studies conducted in the Northeast region have revealed that an increasing number of people are interested in ecotourism and are trying to practice this form of tourism, precisely because of the protection of the environment. But, there is a need for an increase in ecological awareness amongst tourists as well as among tourism employees.

Name	Area (ha)	Tourists
Danube Delta	580000	96090
Retezat National Park	38047	10000
Rodnei National Park	46399	20000
Semenic National Park	36664	60000
Călimani National Park	24041	10000
Cheile Nerei National Park	37100	10000

Name	Area (ha)	Tourists
Piatra Craiului National Park	14800	100000
Cozia National Park	17100	50000
Domogled National Park	60100	10000
Munții Măcinului National Park	11321	10000
Bucegi Natural Park	32663	1000000
Porțile de Fier Natural Park	115655	60000
Apuseni Natural Park	75784	300000

**Figure 1.** The most important national and natural parks in Romania

Source: INCDT, 2015a

The Association of Ecotourism in Romania (AER) considers the main ecotourism destinations in Romania to be: Dornelor Country, Hațeg Land, Apuseni, Danube Delta, Tușnad Spa, Tarnava Mare, Bran County, Lăpuș County and North Dobrogea - Macin Mountains. In addition to these destinations, AER also promotes four thematic paths:

- nature trail, in Hateg Country / Retezat National Park;
- Tales of Macin in the Macin Mountains National Park;
- 12 Apostles, in Călimani National Park;
- the stories of the forest, in the Jiu National Park (<http://www.eco-romania.ro/en/ecoturism/poteci-tematice> accessed on 14.04.2017).

The main ecotourism activities in our country include: hiking, animal sightseeing tours (bears, wolves, lynx), birdwatching (more than 320 species of birds live in the Danube Delta), equitation, cycling, nautical activities (Olt, Mureș, Bistrita and Danube), winter activities, caving tours, photo tours, cultural tours, gastronomic tours (<http://www.eco-romania.ro/ro/tour-romania/tururi-si-activitati>).

Many of the national and natural parks (Retezat, Apuseni, etc.) in which ecotourism is practiced are located near disadvantaged areas, tourism being a solution for the locals (Dobre-Baron 2006: 53). And this tourism can support local infrastructure and conservation programs, helping small farms in rural communities by providing new sources of income, markets for craft products and eco products, social interaction and an increasing role for women (Turnock 2002: 63).

Although inside the protected areas the main form of tourism is ecotourism, mass tourism - also practiced - can raise some problems. There is also a situation where ecotourism does not work properly, a situation encountered in many destinations, where conflicts occur between the conservation goals and the incorrect implementation of ecotourism. Matei (2011: 38-39) outlined a series of measures deemed necessary:

1. a careful and intense promotion, but focused on the particularities of each park, determined by the existing plant and animal species, attractions and traditions;
2. the system of visiting parks based on permits should be generalized, together with a rigorous organization of the entrances to the park;
3. walking in the park should be supervised by guides, able to answer all problems and challenges. Guidance can also be an opportunity to generate jobs for locals;
4. limiting entry into the park to groups of up to 25 people (or less in some cases) in order to reduce the impact on the soil on the mountain paths;
5. providing accurate information about seasonal attractions that can generate a brand for the park;

6. In some seasons, partnerships can be established with educational institutions for the organization of excursions, volunteer camps or practice periods;
7. good organization of camping sites and their supply with firewood and waste collection;
8. organizing educational projects for locals, about the benefits of ecotourism.

From the perspective of the Danube Delta Biosphere Reserve (R.B.D.D.), which represents the most important protected area in Romania, Turtureanu (2006: 31-32) is advancing a series of specific proposals for the implementation of a tourism based exclusively on ecological principles:

1. tourism must gradually become an organized activity, practiced in a group or individually and under the conditions of a local collaboration with the Biosphere Reserve Administration;
2. it is necessary to develop a coherent legislative framework for the development of tourism activity in the reservation;
3. In the context of the protection and conservation of deltaic ecosystems it is necessary, for the beginning, that the tourism activity in R.B.D.D. To be carried out by economic agents who have an adequate material basis;
4. Restructuring and diversification of tourism forms and programs as follows:
  - promotion of specialized, low-polluting tourism; It is about knowledge tourism, scientific, professional, but also aesthetic, for ornithologists, naturalists, ecologists, fishermen, geographers and other tourists;
  - development of holiday tourism, heliomarine cure on delta coastline and complex sea-delta programs;
  - agrotourism development in some villages;
  - the extension of excursions - which remain a specific form of tourism in the Delta - one - two days, with hydro - carbons, and five - six days with floating pontoons and hotels;
  - the development of tourism programs leading to the expansion of tourism in the reserve and in seasonal or off season seasons, decongesting the peak summer season;
  - introducing forms of sport agreement and nautical agreement programs appropriate to the Delta aquatic areas and in connection with ecosystem protection requirements.

### 3. Volunteer tourism

Due to the numerous problems faced by Central and Eastern European states following the fall of communist regimes, especially in the social field, a number of NGOs or travel agencies (Table 4.7) from abroad (especially USA and the UK), offer the opportunity to volunteer in these countries.

The fact that Romania finds itself in the offer of most of the agencies or organizations mentioned, is not a reason for praise. It only demonstrates the fact that there are many areas where the authorities fail to cope with all the challenges, representing niches operated by the institutions mentioned in the table above.

In Romania there is a wide range of activities that can be done by foreign volunteers, for amounts between 500 and 2000 USD.

Company	BG	CZ	HU	PL	RO	SK
Concordia	•	•	•	•	•	•

Company	BG	CZ	HU	PL	RO	SK
Financial Services Volunteer Corps	•	•		•	•	•
Global Volunteers			•	•	•	
Habitat for Humanity	•		•	•	•	•
hands up holidays					•	•
Project HOPE		•	•	•	•	•
responsibletravel	•		•		•	•
Service Civil International		•				•
Youth For Understanding	•	•		•	•	•

**Figure 2.** NGOs present in Central and European countries (Bulgaria, The Czech Republic, Hungary, Poland, Romania, Slovakia)

Source: the websites of mentioned companies

#### 4. Slow tourism

Internationally, the Slow movement is still at an early stage. It has some specific features to other forms of tourism, namely:

- it is a voluntary movement, until now there is only a limited number of dedicated tourist packages;
- slow philosophy can apply to any other form of tourism, most of which is available in connection with urban tourism;
- Has a high level of networking, the followers of this philosophy are using extremely modern means of communication: blogs, facebook, websites, forums etc;
- promotion is based rather on the impressions of other tourists than on the actual advertising;
- the most important basins remain Italy and France, but there is a great opening to other European countries.

The main attractions in Central and Eastern Europe for slow tourism are mainly focused on the capitals of the countries (Budapest, Prague, Bratislava) and on rural areas and protected areas (Poland, Romania).

The capital of the Czech Republic, Prague, is considered an important attraction for slow tourism followers. The main reasons are the man-made resources, but also gastronomy, cleanliness and somewhat lower prices compared to Western Europe ([http://www.slowtrav.com/other/notes/s\\_prague.htm](http://www.slowtrav.com/other/notes/s_prague.htm) accessed on 19.03.2017).

Bratislava, the capital of Slovakia, is, in turn, an important attraction for slow tourism. Although it is much smaller than Prague, Budapest or Vienna, Bratislava has many anthropogenic resources.

Besides being included in a Danube circuit alongside Bratislava and Vienna, Budapest also offers a number of more non-conformist attractions: walking through the product markets, a day at the thermal baths, live music cafes and historical buildings (<http://www.theartofslowtravel.com/2011/09/budapest-vienna-and-bratislava-cruising-along-the-danube/> accessed on 19.03.2017).

In Poland, slow tourists are attracted to both the man-made resources of Krakow and the natural resources in southern Poland. A special category is the culinary excursions in rural areas (<http://www.slowtravel.pl/index.html> accessed on 19.04.2017).

In Bulgaria and Bosnia-Herzegovina, people interested in sustainable tourism have created associations to promote slow tourism. Unfortunately, detailed information about the two destinations is not yet available ([http://www.slowtourismclub-bih.org/home/index.php?option=com\\_content&view=article&id=2&Itemid=3&lang=en](http://www.slowtourismclub-bih.org/home/index.php?option=com_content&view=article&id=2&Itemid=3&lang=en))

In Romania, the slow food movement has appeared relatively recently, with non-profit organizations or associations in Bucharest, Făgăraș, Turda and Brașov (<http://www.targultaranului.ro/>; <http://slowfoodturda.ro/site/>; <http://www.slowfoodbrasov.com/> accessed on 19.04.2017). Romania has significant potential in this field, as Romanian agricultural products are appreciated by people interested in gastronomy. There are 14 conviviums (Table) on the slowfood.com site in Romania, but many of them have shut down or have stopped working. The main problem identified is the approach. Turda Convivium - perhaps the most active in the country, is pro-bono managed and is more a hobby than a business.

Here we can also mention that Romania has thirty-three products in the Ark of Taste, including borscht, braga, cheese, red onion, pastrame, jams in the Saxon villages, smoked trout etc.

The rather long list shows that there are people who are interested in this concept: both producers who are willing to invest time and money to create traditional products as well as consumers who pay relatively higher prices than similar products.

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# ASPECTS OF RECRUITMENT AND SELECTION OF HUMAN RESOURCES IN ORGANISATIONS. THE PERSPECTIVE OF THE EMPLOYERS FROM BIHOR COUNTY

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**Abstract:** *The present paper contains, in the first part, theoretical aspects regarding the recruitment and selection of human resources, and in the second part there are emphasized the results of a qualitative research by using the focus group method with persons responsible for the recruitment and selection of human resources, inviting to take part in a discussion the representatives of 10 economic-social units from the county, with which Bihor County Agency of Employment interacts the most frequently. One of the aims was to identify the role given by the employers to the recruitment and selection methods and the characteristics they especially aim to during the selection process. As a research instrument the structured interview was used, with a number of 9 questions, synthesized on the following dimensions: the importance given to the candidate's performance for selection for the employment in the organisation, the relevance of the candidates' personality characteristics in the selection process, the opportunity to organize tests/exams for selection, the impact of instruction or previous experience and of the involvement in the volunteering actions in the personnel's selection, the specialists' opinion reported to the reputation of the graduated university, as well as of the grades received at school. Thus the majority of the specialists give an important role to the manner in which the candidate presents himself at the interview, they agree with the idea of taking into consideration the personality features of the candidates, but with applicability to the real working conditions. Also they consider that the reputation of the university is not a special problem for them, neither the grades obtained while studying and the exams or knowledge tests are especially used in the cases when jobs need speciality knowledge which is absolutely necessary for the activities. In conclusion, the focus-group participants have proved that the recruitment and selection of work force is one of the essential objectives of the economical-social units, that the selection methods are known and applied according to their specific. Although the results cannot be generalised, we consider that the answers of the employers included in the sample are relevant in order to outline a pertinent perspective on the human resources recruitment and selection modalities at the level of the main employers with which Bihor County Agency of Employment interacts the most frequently.*

**Keywords:** *recruitment; selection of human resources; employers; focus group.*

**JEL Classification:** *J23; J24.*

## 1. Introduction

The recruitment and selection of the human resources represent the human resources management's most important stages, the aim of the two processes being to obtain with minimal expenditures the necessary human resources that is specified

in the recruitment process and derives from the human resources plan. (Armstrong, 2007)

The recruitment of the human resources consists of the identification, attraction and initial sorting of the human resources offer which is available to take over a certain position. Recruitment is not a simple activity as the recruitment policies and management practices are influenced by numerous internal factors: the specific of the organisation's activity, the specific of the practices management, the culture of the organisation, its dimension, the internal regulations regarding recruitment in the organisation, the qualification degree, the offered salary, the hierarchic and horizontal relations of the position, but also external, social, economic, legislative ones, from which the following can be mentioned: the locality's social and economic development degree, the unemployment level, the existence of some vocational schools, high schools, faculties that have profiles resembling the position, the legislation in force regarding recruitment, the direct competitors that employ workforce on similar professions, etc. (Lefter, Deaconu and Manolescu, coord., 2012)

The aim of recruitment is to limit a large mass of potential employees to a relatively limited group that will subsequently participate in the selection process and from which the employments in the organisation will be made. In this sense we can say that the success of recruitment has a significant effect on the quality of the personnel's selection process.

The recruitment's efficiency mainly depends on the fact that recruiters know the following three aspects: knowing the vacant position, the sources of human resources and the legislative framework, that forbids discrimination on the labour market, assuring equal employment chances and provides a series of measures regarding the stimulation of employers for the employment on the labour market of the underused or vulnerable persons. (Certo, 2002)

The job is characterized through a sum of tasks, obligations and responsibilities afferent to an employee who have a certain position or function in the hierarchic pyramid of an organisation, and the job description represents an important document and necessarily elaborated following a process of analysis of the work. In what concerns the analysis of the work, there can be identified two directions: one direction consists of the analysis of work centred on the job (job description), and the second direction concretizes in the analysis of work centred on the holder of the job (job specification).

According to Chraif (2013) job description represents "an activity of collecting information regarding the nature of responsibilities, tasks, activities and actions contextualised at the level of a certain job"(Chraif,2013:21), and job specification refers to the analysis and the registration of individual attributes and particularities that must characterize the holder of the job, and here we talk about "the psychological profile of the job or more exactly of the psychological exigencies that must characterize a holder of a job". (idem, p.23)

In order to cover the available jobs existing at a certain moment at the level of an organisation we can turn to the external labour workforce market or to the organisation's existing employees, that can be promoted or transferred. Thus, the human resources sources can be internal or external. Usually it is turned to the external workforce market if the organizations register a quick development and the number of the personnel is insufficient, but also in the situation when some employees leave the organization and cannot be replaced with employees from the

interior or when the organization has jobs that need a special preparation that the other members of the organization don't have.

The conditions on the labour market can have a significant impact on recruitment. If on the workforce market there is a higher offer of qualified workforce whose professional training is in conformity with the requirements of the free jobs, even a low recruitment effort will determine the identification and attraction of a high number of potential employees, and if on the labour market the offer of personnel having the qualification needed by the vacant job is low then the organization will have to make efforts in order to find and attract candidates and will have to offer to those selected special conditions such as big salaries, enhanced work security or any other types of stimulants. (Scarpello and Ledvinka, 1988)

Correspondingly to the two sources of human resources we can identify two recruitment methods, that is internal recruitment methods, that consist of the specific means by which the present employees of the organisation are identified and attracted, able to occupy the available jobs, and the external recruitment methods, that regard the means to attract in an organization candidates from external recruitment sources, the conventional external recruitment method is considered to be the publicity. (Stanciu, et. all, 2003)

The advertisement must be conceived so that it draws the attention, it develops interest and wish for a position, it stimulates action from those interested in the position, this being possible by: mentioning the need for recruitment, selecting the population who the message is for, mentioning the "strong points" of the organization and position, choosing the best mean and establishing correctly the content of the recruitment advertisement. (Zorlenţan, Burduş and Căprărescu, 1996).

In this sense, the specialty studies show that the image that the organization transmits through publicity is especially important in attracting the wished candidates, this having a significantly bigger impact than the way the vacant position is presented and described. (Byars and Rue, 1987)

Concerning the employment advertisements Jakob Schrenk says that these are longer and longer, more ambiguous, they describe the activity veiledly, but define the necessary qualities more exactly and in more detail, which he says "are the same even if we talk about a cook or an economic counsellor: the wish to get involved, interpersonal and communication abilities, team spirit, enthusiasm, passion, emotional intelligence, social sensibility, ambition" (Schrenk, 2010:25)

Moreover, the organizations can carry out the external recruitment activity on the occasion of special events, job fairs or can turn to learning institutions, which represent an important source to recruit some managerial, technical, professional talents, persons that come into contact with the organization, such as visitors, probationers, business partners, various collaborators, but also to public or private workforce recruitment agencies. (Radu (coord.) 2003)

According to Mathis, Nics, Rusu, organizations generally have specific recruitment criteria for the personnel such as: competence, length of service but also the candidates' development possibility. Referring to competence, in the case of recruitment it has a wider acceptance because it involves both the skill in fulfilling tasks demanded by the job, and other personal qualities such as intelligence, creativity, the easiness to familiarize with the working group, and the results obtained in the present position or the previous ones have an important role.

In what concerns the length of service, the organizations have at their disposal more possibilities: to recruit young people as it is considered that they can be

professionally trained and shaped more easily, or to recruit persons who have length in service and have already acquired a certain working experience. It is important that the organizations, and especially those that have a lot of employees to practice a recruitment policy so that the age pyramid allows normal promotion possibilities. This makes possible the entrusting to the new employees the jobs that fit them the best and thus their individual development is enhanced, but also that of the organization. (Mathis, Nics and Rusu, 1997)

In the recruitment process mistakes can appear, which have a negative impact on the organization's activity, and among the causes that can lead to the recruitment's failure there are: the recruiters' incompetence or lack of interest, they don't know the demanding and specifications of the job, the wrong composition of the job advertisement, the recruitment is not perceived as being a marketing activity. (Păuș, 2006).

The selection is the process of choosing the candidate who will occupy a certain position and it is carried put through a sorting of the candidates recruited for a certain job, "based on an examination that takes into consideration the preparation, aptitudes and working capacity of each candidate" (Mathis, Nics and Rusu, 1997:100)

According to Chraift (2013) the objective of professional selection consists of "the individualisation from a recruited population of the most suitable individuals, whose aptitudes will fit the best in the specific of the job" (Chraift, 2013:131)

The selection of the human resources can be realized in two manners: empirically, when it is realised based on recommendations, impressions, physical aspect, the manner of presentation at the interview, or scientifically, when it has judicial, rigorous basis and uses selection methods such as: performance tests, questionnaires, evaluation centres, adaptive computerizes testing.

No matter what methods are used to sort candidates, almost any selection process includes an interview, and the most frequent subjects in the interview refer both to the candidate's working experience, his academic accomplishments, personal qualities such as physical qualities, communication abilities, the candidate's adaptability, his vocabulary, and to the candidates' objectives and being adequate for the organization's culture. (Stanciu et al, 2003)

The selective employment of the new personnel is part of a set of seven dimensions together with the safety of the job, the self-management of the teams and the decentralization of taking decisions, offering compensations according to performance, detailed instruction, reduction of the status differences and barriers, the distribution of the financial and performance information in the organization, identified by Pfeffer in the paper "Human resources in the equation of profit", dimensions that he says "seem to characterise the most, if not all the systems that produce profits from people" (Pfeffer, 2010:79)

Referring to the selection of the personnel, the same author says that in order to build a high performance organization it is necessary: to exist a great number of candidates for each vacant position, to check the cultural suitability and attitude of the candidates, to use as many checking sessions as possible to consolidate employment and to emphasize the seriousness of the selection process, as much as it is possible to have involved in the selection process employees from superior hierarchic levels in order to point out the importance of the employment activity, and this process to end through the evaluation of the results and performance. (idem, p.89)

## 2. Qualitative research through the focus group method with the persons responsible for the recruitment and selection of human resources

In order to deepen the theme regarding the preoccupations shown at Bihor county's level for the recruitment and selection of the workforce, we have tried to capture the phenomenon through a qualitative method. In this sense, we organized a focus group with the persons responsible for recruitment and selection of human resources, inviting to take part in a discussion representatives of 10 economical-social unit from the county, with which Bihor County Agency of Employment interacts the most frequently.

**Table 1:** The features of the 10 economical-social units

No.	Name of the economical-social unit	Number of employees	The specific of the activity	The position of the person named as respondent
1.	Auchan	250	Retail	Human Resources Specialist
2.	Carrefour Oradea	350	Retail	Human Resources Specialist
3.	Celestica	1400	Production – the production of components for electronic equipment	Human resources Inspector
4.	Isrom	56	Production and provision of services in more domains: mechanic, hydraulic, electric	Assistant manager
5.	PGS	1400	Production- the manufacturing of furniture	Human Resources Specialist
6.	Professional Academy	93	Services-supply of professional training services	Manager consultant
7.	RDS	10000	Services-Supply of cable and internet services, as well as landline and mobile phone services	Coordinator Digi caravan

No.	Name of the economical-social unit	Number of employees	The specific of the activity	The position of the person named as respondent
8.	Turism Felix SA	800	Tourism	economist
9.	Vernicolor	600	Production-manufacturing of plastic materials and painting services for the auto industry	Human Resources Specialist
10.	Vision Digitech	386	Services – repairing/reconditioning of electronic equipments	Human Resources Manager

Source: own processing

As research instrument a *structured interview* was used, with a number of 9 questions (the first seven aim the obtainment of information and opinions regarding the importance given by the employers to some characteristics of the candidates, respectively the knowledge and aptitudes of the candidate, previous experience, professional initiation / training courses, personality features, domain of studies etc. and two questions regarding the training of the workforce.

One of the aimed objectives was the identification of the role given by the employers to the personnel's recruitment and selection methods and of the characteristics they especially search during the selection process.

From the analysis of discussions and answers a few conclusions resulted, regarding the recruitment and selection of human resources, that we will synthesize on the following five dimensions:

**1. The importance given to the candidate's performance for selection for the employment in the organisation:**

With one single exception, meaning the position of the representative of *Carrefour Oradea*, who considers that *"I did not have where to choose from; the interview is limited only to the availability to work"*; the other participants in the discussion give an important role to the manner in which the candidate presents himself at the interview, through the fact that he offers the point from which opinions can be formed, regarding *"free communication, self confidence, conviction"* (Auchan); the candidate's non-verbal behaviour can be determined *"The way he presents himself is very important. The non-verbal language says more than words"* (Celestica); information is obtained, regarding the possibility to immediately face the job, even if he can be perfected while working *"It is relevant because we can make an opinion about the candidate. It is possible that he opens up along the way, even if he is more timorous at the interview, but for some jobs we need people can cope immediately"* (PGS); information is offered about the management of some emotional situations *"the way he knows how to handle an emotional situation related to a certain question"* (Professional Academy); about the candidate's physical aspect *"We never select without an interview. This consists off a free discussion with the person, we are*

interested in the personality (including the physical aspect and diction) and the experience because he will subsequently interact with the tourists" (Tursim Felix). Generally it is considered that the performance at an interview is relevant, as a CV, no matter how impressive it is, could hide some deficiencies *"The performance at the interview matters in a proportion of 90%. The CV can look good on paper and the reality behind being totally different"* (Vision Digitech)

## **2. The relevance of the candidates' personality characteristics in the selection process**

The interviewed specialists agree with the idea of taking into consideration the personality features of the candidates but with applicability to the working conditions. In commerce, for example, there are necessary features such as *"it is important to be kind, punctual and to respect the working procedures"* (Carrefour Oradea). In the production activities various qualities are demanded, according to the specific of the activity in which the candidate will be integrated *"a monotonous person can work in a department, repetitive tasks, an active person on a position that needs movement"* (Celestica); *"if you hire a person on a selling position he has to be dynamic, to communicate well, you can give him a test, a role-play exercise, to see what personality features he has, is he choleric, melancholic...to be the appropriate person for the appropriate job"* (Professional Academy). Some societies are more selective and explicit that they want *"candidates with a strong personality, with attitude, resistant to stress conditions, team work"* (RDS).

## **3. The opportunity to organize tests/exams for selection**

The knowledge exams or tests are used especially in the cases when jobs need specialty knowledge that is absolutely necessary for the activity. For example Celestica organizes *"Technical exam elaborated by engineers from the interior"* in order to recruit specialists. Other organisations turn to examinations especially under the form of working trials *"knowledge is tested in the probation period"* (Isrom). There are organisations which consider that hiring people who already have the knowledge necessary for the job represents a great advantage for the employer, thus relieving him from supplementary training expenditures: *"There are some positions for which verification tests are carried out, for example for an accountant there is an accounting knowledge test. I cannot say that it matters 100%, but when you have a candidate who already knows what to do is a great advantage"* (PGS). Professional Academy organizes complex exams through which they evaluate the knowledge but also the psychological processes needed according to the job they are going to occupy. *"I give tests in order to verify the candidate for certain aspects related to the job description, the nature of the position, but also intelligence tests. I check if he speaks and writes correctly in Romanian, in certain jobs, such as communication, secretary, if they do not express themselves correctly can harm the image of the company"*. (Professional Academy). Vernicolor gives special importance to the candidates' examination for selecting them, believing that there is a concordance between the performance in the exam and the one from the working place *"Usually we give the candidates a knowledge test which is very important for the recruitment. We make the selection after the test, which consists of exactly what the future candidate will have to do. Obviously if his test is good, he will be the same within the department"*. (Vernicolor)

Digitech Vision declares that they use differentiated selecting methods, according to the job for which the selection is organised. *"It depends on the job. For example, for jobs such as production manager, the adequate experience is extremely relevant."*



Sometimes we delimit close candidates through recommendations. There are also jobs for which experience is not needed but rather a set of native abilities or learned in school or through courses". (Digitech Vision)

#### **4. The impact of instruction or previous experience and of the involvement in the volunteering actions in the personnel's selection**

For the units that recruit unqualified workforce, it seems that training, previous experience or involvement in volunteering actions are not very relevant "At execution level, experience is not necessary" or in what concerns volunteer activity it is appreciated that this "Does not have any impact" (Auchan); "experience is not important at all; everything is learned", and in what concerns instruction and participation in practical activities, the same type of societies mention that: "we have recruited from among those who have done their placement at us; participation in such constructions matters; they do not have patience to take part in instructions" (Carrefour). Societies that use qualified workforce in specific domains appreciate the importance of the instruction, of previous experience, even if as volunteer activity or placements organized during school and professional trainings. "Yes, experience is appreciated...as well as recommendations, to the extent that we trust the one who made the recommendations (we check if trustworthy)" and in what concerns placements, the same unit declares "I consider it a plus, especially the internal placement" (Celestica). It is relevant the fact that also in this case the big part of the participants has admitted the importance of the job's specific for which recruitment is organized. *According to the specific of the job. There are positions for which experience is not important, for example, we have jobs for which we search French speakers and this is the most important criteria, other colleagues can subsequently prepare them for the specific of the job. We take into account the recommendations that arrive to us from the interior or the exterior if we know the company he has worked for, we check why he left, the attitude he had* (PGS). "It depends on the level of the job. Experience matters because it makes him more credible, the man that works, that has experience confronts with certain situations when he has to take decisions. If he only has experience, and not practical experience as well it is harder for him to take correct decisions or to have a proper attitude for that job", notices the representative of a specialized society, (Professional Academy), that especially appreciates the availability of the candidates to take part in specific qualification courses. "A faculty diploma is no longer a guarantee for a job, because the faculty has become a diploma factory and we can no longer know if behind the diploma there is real knowledge. If the person wants to improve, if beside faculty he attends a course, then he really wished to develop and this is very important. It is also important that they take part in volunteer activities, especially for graduates without experience, it is a working experience and can help the young find they like. What I want the most is to find people who come to work with pleasure, even if he doesn't have the necessary knowledge I want to see him passionate and willing to learn".

As a common aspect of the majority who participated in the discussions, the importance given by the employers to the candidates' involvement in the volunteer activities can be reminded, considered as a manifestation of seriousness, wish for knowledge, as a guarantee of the devotion reported to the new job.

#### **5. The specialists' opinion reported to the reputation of the graduated university, as well as of the grades received at school**

To this question, the majority of the specialists consider that the university's reputation is not a special problem for them, neither the grades obtained while

studying. Nevertheless, some specialists appreciate that the reputation of the graduated university is taken into consideration in the sense that *"In the recruitment I do, I search if he has graduated a faculty in order to be employed, there are jobs where you cannot hire without graduating a faculty. I also pay attention to MAs, if they are relevant for the job, to universities, if he graduated in Cluj or Marghita or Vadul Crisului, but it is not the first selection criteria."* (Professional Academy), and in what concerns the grades received at the graduation exam, there are opinions such as: *"They don't matter very much. It's not ok to be 5, but if he is well prepared and with a strong base of theory and he has good results in practice, we do not have any problems with the grades received at the graduation or dissertation exam. For example he can learn for four years very well and at the graduation exam to receive a smaller grade, which for us is not a problem"*. (Vernicolor) . Some specialists suggest that in the case of the new employees the university's reputation can represent a positive point when recruiting *"Less for a person with experience. It is relevant for those who have just graduated"* (Vision Digitech)

## Conclusions

Recruitment and selection represent the essential stages for assuring human resources in organizations.

Starting from the results of the study regarding the recruitment and selection of human resources, we can formulate some conclusions:

- Thus, with one single exception, ascertaining in the position of the representative of *Carrefour Oradea*, who considers that *"I did not have where to choose from; the interview is limited only to the availability to work"*, the other participants give an important role to the manner in which the candidate presents himself at the interview;
- The questioned specialists agree with the idea of taking into consideration the personality features of the candidates, but with applicability to the real working conditions.
- The exams or knowledge tests are especially used in the cases when jobs need speciality knowledge which is absolutely necessary for the activities.
- For the units that recruit unqualified workforce, it seems that instruction, previous experience or involvement in volunteer activities do not have great relevance.
- The majority of specialists consider that the reputation of the university is not a special problem for them, neither the grades obtained while studying

## Research limits:

The main limit of the research is the small number of subjects included in the focus group as well as the fact that they haven't been chosen in order to be representative for the employers from Bihor county. Although the results cannot be generalised, we consider that the answers of the employers included in the sample are relevant in order to outline a pertinent perspective on the human resources recruitment and selection modalities at the level of the main employers with which Bihor County Agency of Employment interacts the most frequently.

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## LOOKING FOR A JOB

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**Abstract:** *The paper aims a better knowledge of the process of searching and access a job in order to identify efficient manners to increase the occupancy rate and optimal capitalization of the working potential. For this we have carried out a quantitative research between people present at the Job Fair, event organized by Bihor County Agency of Employment, on 22<sup>nd</sup> October, 2016. The research was carried out based on sample of 322 people who were looking for a job, and the biggest percentage, of 75,09% was represented by the unemployed. The research method was the sociological survey, and the used research instrument was the questionnaire. It contained questions that regarded the methods used to find a job, the characteristics of the searched job, the availability of the subjects to accept jobs in other localities than the one they reside in, as well as the jobs aimed by the subjects. The conclusions resulted following the study show that the most used job searching method of those over 25 years old is contacting acquaintances, respectively accessing specialized networks in the case oh young people under 25. The most searched characteristic of the job remains the salary, and the most searched jobs are those that need superior level of education. Referring to the social relationships Granovetter (1995) emphasizes their role and that of their structure in supporting those who are looking for a job and explains the employability's success in the case of people included in big social networks, but for a shorter time, so that these persons can demonstrate their competences, without deteriorating their relationships. The idea concerning the role of information networks and influence on the labour market is also strengthened by other studies (Corcoran, Datcher and Duncan, 1980) that look at the difference between different groups of workers according to the access to these networks and the effects on the level of salaries.*

**Keywords:** *job; demand; offer; labour market.*

**JEL Classification:** *J23; J24.*

### **1. Introduction. About looking for a job versus looking work labour force**

On the labour market the heterogeneity is very high, the possibility to superpose the demand and the offer being reduced due to the educational and occupational structure of each of them. In these conditions, only a very good informing and full transparency of this market, doubled by a real interest in long for a job and adequate counselling of those who are in this situation would allow a superior exploitation of the working resources. Just establishing some indicators regarding the increase of the labour force occupancy, such as those included in the document UE 2020 (see UE 2020), is not enough if it is not doubled by the identification of ways to make labour market more transparent, to bring closer those who have the demand and

those who offer labour force, to make the activity of the institutions that act on the labour market efficient and to increase trust in them.

On the labour market there is permanently a big number of employers and a big number of persons who are looking for a job and this fact makes impossible for those who look for a job to know all the conditions offered by each employer, respectively the employers to know the working potential of each person looking for a job. If we add to these the fact that both the working conditions, as well as the potential of the workers are in a continuous change, their permanent update being necessary, we have a clearer image over the difficulties met in the "fitting" process of the demand and offer of labour force. The solution, in Stigler's opinion, could be represented by the private agencies that should specialize in "the occupations in which information is most difficult for the employer or worker to obtain" (Stigler, 1962:102)

The meeting between demand and offer is mediated, as on any other market, by the price. The price of the labour force has determined, especially in the last decades, meaningful relocations of the production towards areas with low cost of the labour force. Another tendency registered nowadays is the availability of the employers to offer very big salaries to some valuable persons given their competences, creativity, fact that generates a real "head hunting", a real challenge for the human resources specialists.

Nevertheless, between the demand and offer of labour force, technology interposes frequently, technology that tends to replace labour force in more and more domains. Although advanced technology is more expensive, sometimes, the cost-benefit analysis shows that acquisition of technology is more relevant, which, after amortization, presupposes low costs, is not tired, does not claim rights, facilities, does not go on strike, does not generate fluctuations at the working place, does not need professional training, in other words, is much less unpredictable in comparison with the labour force. Nevertheless, an economical-social activity where human is absolutely absent is unconceivable. Even if only in the domains where technology is conceived, realized, maintained and perfected, there is a need for people. Further people with education and different competences will continue to look for the most suitable job, and Stănescu (2010) suggests three important parts in the searching process: self-evaluation, studying the labour market and the effective search of a job, using specific techniques.

## **2. Theoretical considerations regarding the search for a job**

The analysis of the search for a job also regards the demand and offer of labour force. On one hand the employers are more or less transparent in informing with regard to the vacant jobs according to the situation of the labour market at a certain point, on the other hand, those who are looking for a job are only interested in the personal benefits that a job could offer. This is why "Job search is a complex and daunting endeavor. Besides the substantial economic losses that unemployment typically entails, job seekers face a variety of non-trivial informational problems when looking for new employment opportunities. They need to inform themselves, for instance, about which firms or industries value their qualifications most and whether these are currently hiring new employees. Moreover, they have to decide how much search effort to exert, which search channels to use, and what kinds of jobs to target, e.g., in terms of occupations or geographical location" (Altmann, Jager, and Zimmermann, 2015)."

In the well-known paper "Getting a job: A Study of Contacts and Careers", Granovetter highlights the role of the social networks and their structure in supporting the persons who were or not looking for a job and explains the employability's success also in the case of people involved in large social networks, but without deteriorating their relationships. In the same manner Granovetter explains the reduced success on the labour market of the housewives or of the Afro-Americans whose social networks are limited to relatives, neighbours, in the first case, respectively members of the group in the second case (Granovetter, 1995).

The idea concerning the role of information networks and influence on the labour market is also strengthened by other studies (Corcoran, Datcher and Duncan, 1980) that look at the difference between different groups of workers according to the access to these networks and the effects on the level of salaries. Ioannides and Datcher Loury on the other hand, sustain that "access to information is heavily influenced by social structure and individuals use connections with others, such as friends and social and professional acquaintances, to build and maintain information networks" (Ioannides and Datcher Loury, 2004:1056).

We can notice a higher and higher need of competences even in the case of jobs that do not need superior qualification or even without qualification: communication abilities, including in a foreign language, problem solving abilities, correct understanding and solving of tasks, adequate behaviour at the working place, etc. in these conditions, the persons with lower competences will find it more difficult to find a job, and the jobs that involve activities with lower qualification will be more difficult to fill in.

Another barrier in making the demand and the offer meet on the labour market is the fact that the person looking for a job limits – lacking adequate counselling – his searches to jobs that are identical or very similar to the previous one, fact that reduces significantly their employment possibilities. A series of studies (Ashenfelter et al. 2005, Belot, Kircher and Muller, 2015, Bennemarker et al. 2009, Crepon et al., 2013, Krug and Stephan 2013, Behaghel et al., 2014) emphasize the effect of counselling when looking for a job including in outlying domains or of looking for alternative jobs. To these there are added the studies that approach the importance of active occupancy policies promoted in the institutions with duties in this domain, respectively the efficiency of the legislation that forces one to look for a job and punishes not doing so (Card et al., 2010). A possibility to identify a suitable job, with reduced costs, is the one that uses the information from the virtual space (Kuhn and Mansour, 2014) to jobs.

But the most used method for accessing a job seems to be the turn to social networks, acquaintances, some researches saying that "Most workers find jobs through word of mouth" (Corcoran, Datcher and Duncan, 1980). The explanation for this option is in the capital of bigger trust in known persons, that can offer supplementary information referring to the working conditions, the working relationships, career development possibilities, salary, job stability, information that completes the image over the job and makes it more convincing compared to that obtained officially.

Moreover, on the labour market often appear pseudo-jobs (non-existing jobs, but which appear in opportunity conditions: nepotism, a person that is professionally very valuable, the intention to expand the activity, etc), respectively the pseudo-searchers (those that only inform themselves, without having the intention to get employed or have another source of income and rather look for a manner to spend their time, or

to socialize, etc). We subscribe in this context to the affirmation of Granovetter: "Job finding is more than a rational process. It is heavily embedded in other social processes that closely constrain and determine its course and results." (Granovetter, 1995:39).

Looking for a job means a certain motivation and determination that can concretise lacking a source of income or the need for professional accomplishment. Another reason that urges to looking for a job is the discontentment, dissatisfaction felt by a person towards his job at a certain point. In any of these cases, the persons confront themselves, on one hand, with the need to get employed, and on the other hand wish to identify the most suitable job, which means time, effort and money, so that we can speak about a veritable economy of searching for a job. Stigler (1962) and Pissarides (2001) theorize these situations by associating the search for a job with the access to information regarding available jobs and with the conditions of occupying a job. To all these it is added a multitude of negative feelings associated to the job searching process, such as: disappointment, frustration, discouragement, dissatisfaction, unhappiness (Clark and Oswald, 1994, Krueger et al 2011, Krueger and Mueller, 2012).

In Bihor county, the people looking for a job show some characteristics deriving from the specific of the labour market from the county. The investment boom from the last 10 years renders the labour force demand to be higher and higher, as well as the demand for competences which find correspondence mainly in the graduates of the four universities from Oradea. The medium wage of the people from Bihor, among the lowest in the country, has started to grow based on the increasing need of skilled labour force. The employers turn to a wide range of the personnel's recruitment manners, both from the urban and the rural space.

### **3. Quantitative research regarding**

#### **3.1. Description of the research**

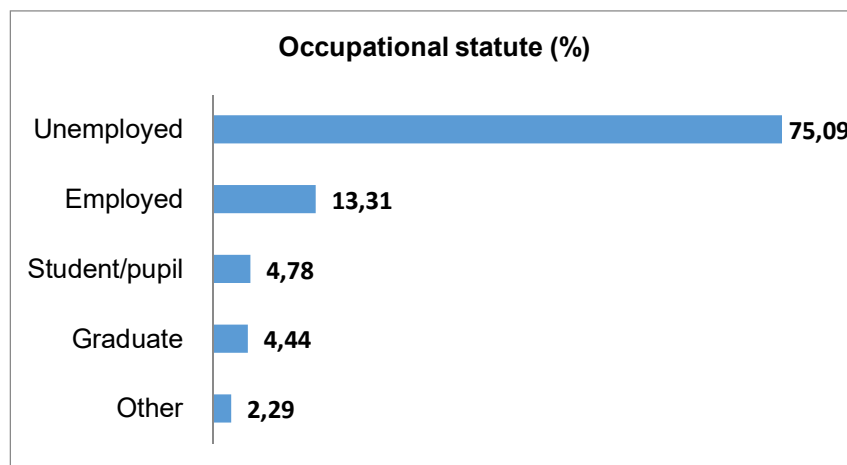
In order to outline an image regarding a job search in Bihor county we have used the opportunity offered by Bihor County Agency of Employment on the occasion of the Job Fair from the 22 October 2016, in order to contact 322 persons that have accepted to collaborate with our team in order to carry out a questionnaire on the theme of the expectations regarding a future job.

*The aims of the study* have resided in: the identification of the main characteristics of the new job in the solicitors' opinion, gathering information regarding the methods used by the subjects in order to find an adequate job, but also obtaining information regarding the solicitors' expectations concerning the attitude of the employers towards the workers;

*The method used* was, as we have already mentioned, the sociological survey carried out based on the questionnaire, in which we have introduced questions in concordance with the aims of the study. *The questionnaire* thus included a set of questions concerning: the methods used in order to find a job; data regarding the main employers and opinions concerning their attitude; the subjects' opinion regarding professional training; the expectations regarding the characteristics of the aimed job.

*The research's universe* was represented by the people looking for a job, no matter if they have or not a job in the present, young graduates that didn't have a job and the unemployed from any category.

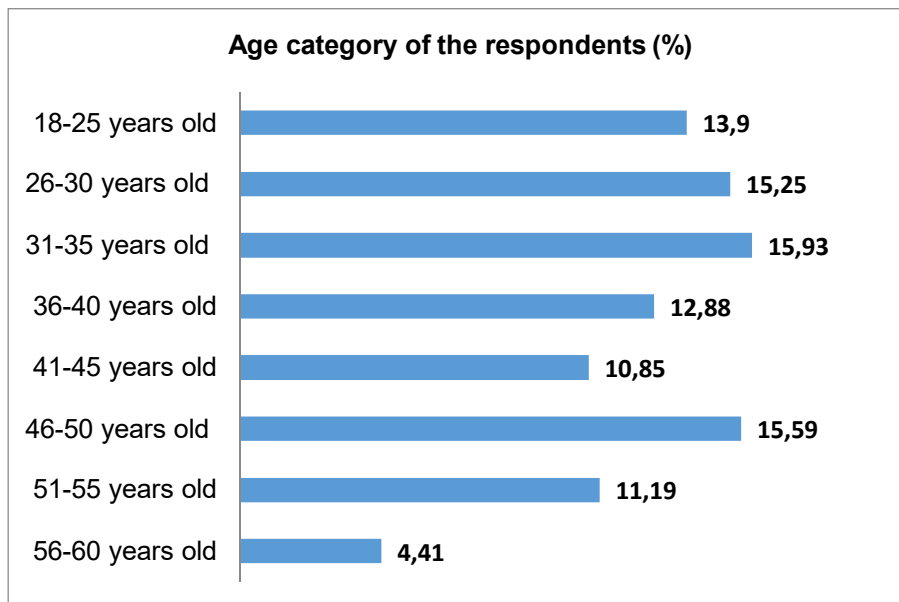
We mention that all the participants in the job fair from 20 October 2016 were interviewed, who have accepted the proposed collaboration. From this point of view, we mention, as *a limit of the research*, the fact that the sample is relatively small and is not representative for the people looking for a job. The conclusions could be generalized, with great prudence nevertheless, to the population that takes part in the job fair. The sample used in the study has thus included 322 subjects, which was structured as it follows.



**Figure 1:** The structure of the sample from the occupational category's point of view

The highest percentage in the population included in the sample is represented by the unemployed, respectively 75,09%, that is over three quarters from the sample, which is normal both under the aspect of the unemployed persons but also under opportunistic level, taking into consideration the fact that the County Agency of Employment is mainly focused on the unemployed. In these conditions it was expected that the most significant percentage of those looking for a job offered through the activities carried out through the County Agency of Employment are unemployed. On the second place in the sample's structure, with a percentage of 13,31% are employed people, but who with the highest possibility, are not satisfied, for different reasons, of they present job, aiming an other job in concordance with their expectations. Interesting is the fact that are available for employment also a relatively small percentage, of approximately 5%, that is approximately 16 subjects (pupils and students) who wish to work and study in the same time, probably in order to obtain necessary resources to maintain themselves during studies. We consider that the relatively low percentage of the graduates looking for a job, is of only 4,44 % does not mean that only they are looking for a job, the other being already employed. It is possible that many of the high school and higher studies graduates to find themselves in the category of the unemployed. It is to be retained from the present analysis the fact that at the job fair those who especially take part are the unemployed.

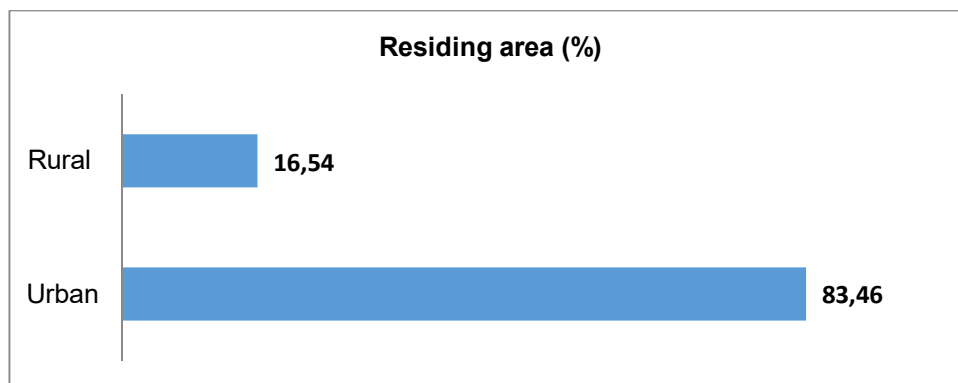




**Figure 2:** The structure of the sample from the age category's point of view

The data presented in graph 2 suggest that a high percentage in the structure of people looking for a job are those in the youngsters' category, that is people up to 35 years old, which represent approximately 45% from the total. We consider that the phenomenon is a significant one especially if we take into consideration the fact that this is the category of people in their period of maximum physical and psychical force, whose working capacity should be used in their own benefit but also that of the society.

On the other hand, although the percentage of people looking for a job, from the category of those over 50 years old is more reduced (approximately 25%), the phenomenon cannot be neglected, taking into consideration the high risk to be placed in the risk groups' category, their employment not being attractive for the employer.



**Figure 3.** The structure of the sample according to the residing area of the subjects

In concordance with the unemployment's structure under the aspect of the residing environment, the highest percentage from the sample's total is represented by the people resident in the urban area (83,46%). On the other hand, the low percentage at the job fairs of the unemployed from the rural area can be also associated with the difficulty related to the travelling expenses.

### **3.2. Presentation of the research's results**

The data collected through the sociological survey based on a questionnaire was processed with the help of the SPSS program, especially based on the frequency analysis. We have synthesised the information on some significant dimensions according to the aims of the research, as it follows:

#### **3.2.1. The methods used by the subjects in order to find an adequate job**

From the qualitative analysis realised based on a focus group with the representatives of the companies from the country, it was retained the idea that these give big importance to the personnel's recruitment, showing preoccupations for knowing the recruitment and selection methods of their own personnel, and applying them differently according to the specific of the job. On the other hand, it was acknowledged the idea that, regardless of the methods by which people who want to get employed are contacted, the employing companies are preoccupied by the selection from the persons available for employment, of those who correspond the most to the specific of the job in that unit.

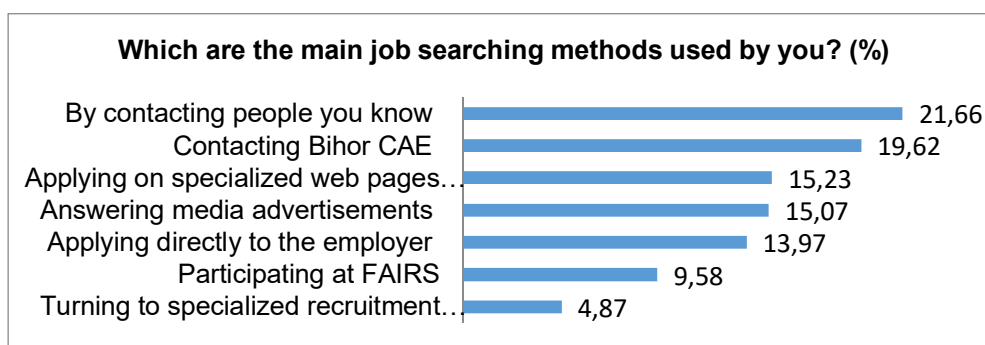
On the occasion of the present research, we wanted to investigate the way through which the job solicitors address themselves to the employer, more exactly we wanted to get to know the accessing by the subjects of the main job searching methods.

The answers to this question in the questionnaire have offered interesting attitudes. Firstly, in what concerns the direct interest of the CAE, appears to be significant the attitude of the subjects, who place on the last but one place turning to job fairs in order to find a job, this method being mentioned by only 9,58% of the subjects, which elicits some explanations that we have also tried to identify through a question.

Instead it seems that the most used method for finding a job is the use by the subjects of social networks (21,66%), made of known persons who work in certain companies and who offer them information about available jobs, and who, on the other hand, are willing to recommend them and guarantee for them when facing the employer, fact acknowledged by Granovetter in his study. Moreover, as it resulted from the discussions with the employers, it seems that it is a method to which they also turn to with the most trust in assuring labour force.

If we take into consideration the fact that 19,62% from the subjects declare that they turn to CAE in order to find a job and we add the 9,58 percent that participate at the fairs organized by CAE, we obtain a percentage of 29,2% of the subjects that access the CAE services in order to identify jobs, aspect that places it on the first place among the preferences for the methods used for employment.

Thus the research data suggest that CAE remains, in the subjects' opinion, one of the main institutions to which people turn to during the integration process on the labour market.



**Figure 4:** Methods used by subjects in order to find job

Taking into consideration the age of the subjects (the majority are young) as well as the impact of internet and of other mass media means, the use by a great percentage of subjects (over 30%) of methods that presuppose accessing virtual communication means but also of the written press, with this aim is explainable. Thus, applying on profile web pages is a method preferred by 15.23 % of subjects, and reading and answering press advertisements have the interest of approximately the same intensity, being turned to by 15,07% of subjects. 13,97 of the subjects turn directly to the employer and only 4,87% turn to specialized companies.

We have considered useful to calculate some correlations between the age of the subjects, their occupational statute or the living area and the method accessed by them in order to find a job. In this sense, the correlation between the used method and the subjects' age category has proven significant ( $X^2 = 28.09$  at a significance limit  $dep=0.0053$ ). As it emerges from Table 2, the correlation is significant especially in what concerns methods: contacting CAE (exclusively participating at job fairs), which is used by all age categories in similar proportions (percentages that vary between 21 and 23, with an average 22,1%), the use of the subjects' social networks, especially by the persons in the age category of over 46 years old (50%), followed closely by the other category (25-46 years old – 42,6%), tendency that can be explained, in our opinion, through the higher relational experience of these people in comparison with the young that in a much lower percentage turn to this method (only 17,6%).

**Table 1:** The correlation between the subjects' age category and the method used in order to find a job

<b>Which are the main 3 methods that you use in order to find a job? (first option)</b>				
	18-24 years old	25-45 years old	46-60 years old	Total
By contacting people you know	17.6%	<b>42.6%</b>	<b>50.0%</b>	40.9%
Answering media advertisements	8.8%	5.7%	9.4%	7.3%
Contacting Bihor CAE	<b>23.5%</b>	<b>21.3%</b>	<b>23.4%</b>	22.3%
Applying directly to the employer	11.8%	11.5%	4.7%	9.5%
Applying on specialized web pages (Ejobs, Bestjobs etc.)	<b>26.5%</b>	17.2%	3.1%	14.5%

Turning to specialized recruitment companies	0%	0%	1.6%	0.5%
Participating at FAIRS	11.8%	1.6%	7.8%	5.0%
<b>Total</b>	100.0%	100.0%	100.0%	100.0%

Nevertheless, the most significant correlation appears when we talk about “Applying on specialized web pages (Ejobs, Bestjobs etc.)”, which is especially used by the young, more intensely by those from the category 18-24 years old – 26,5%, followed by the next category 24-45 years old – 17,2%

**Table 2:** The correlation between the subjects’ occupational statute and the method used in order to find a job

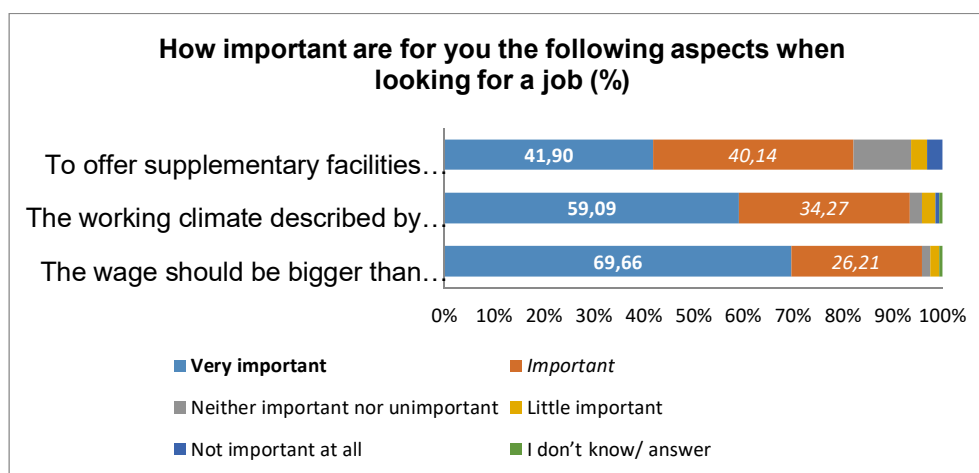
<b>Which are the main 3 methods that you use in order to find a job? (first option)</b>						
	Employed	Unemployed	Graduate	Student/pupil	Other	Total
By contacting people you know	<b>21.9%</b>	<b>49.4%</b>	11.1%	<b>27.3%</b>	0%	41.9%
Answering media advertisements	6.2%	8.4%	11.1%	0%	0%	7.7%
Contacting Bihor CAE	<b>37.5%</b>	<b>19.3%</b>	11.1%	18.2%	50.0%	22.1%
Applying directly to the employer	9.4%	9.6%	0%	9.1%	0%	9.0%
Applying on specialized web pages (Ejobs, Bestjobs etc.)	12.5%	10.2%	<b>66.7%</b>	<b>27.3%</b>	0%	13.5%
Turning to specialized recruitment companies	3.1%		0%	0%	0%	0.5%
Participating at FAIRS	9.4%	3.0%	0%	18.2%	50.0%	5.4%
<b>Total</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

An even more significant correlation ( $X^2 = 67,72$   $p = 0.000$ ) was identified between the subject’s occupational statute and method accessed in order to find a job (see Table 3). Firstly, it appears as a paradoxical fact, respectively the unemployed who have permanent contact with CAE and concerning whom it would be expectable to contact the specialized institution in order to integrate or reintegrate on the labour market, turn in the highest percentage (49,4%) to acquaintances in order to get employed. The same method is being accessed, by students /pupils (27,3%) and those who work but want another job (21,9%). Nevertheless, the graduates turn in a big percentage (66,7%) to accessing specialized web pages, followed by students and pupils (27,3%), tendency which is in concordance with what we have previously presented referring to the age category and used method.

We mention that from the realized calculations, there hasn’t been identified a significant relation between the living area of the subjects and the method accessed in order to get employed ( $X^2 = 1,51$   $p = 0,958$ )

### 3.2.2. Characteristics of the searched job

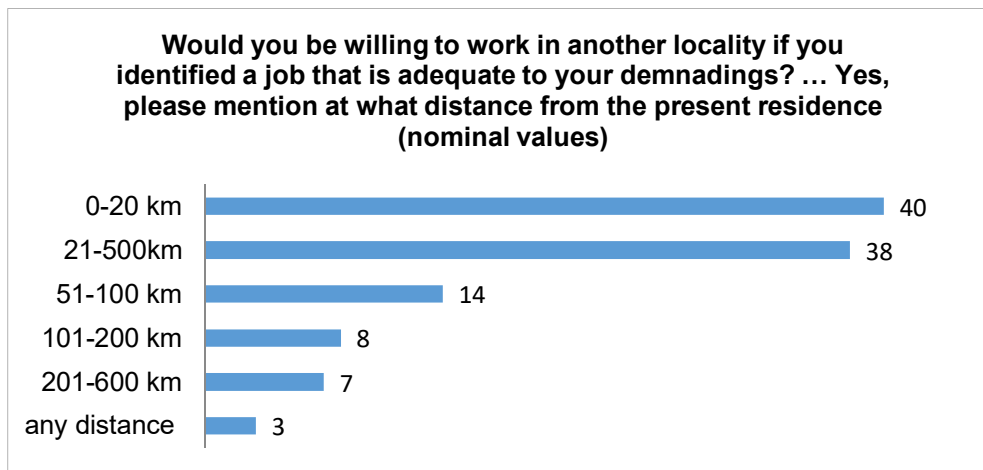
We have tried to investigate the subjects' preference for some of the characteristics of the job by introducing in the questionnaire a question through which we wanted to understand to what extent factors such as salary, working climate and obtaining facilities are important when accepting a job.



**Figure 5:** The subjects' preference in relation to certain characteristics of the future job

The data collected suggest that, in the subjects' opinion the element that matters the most (to a large and very large extent) refers to the obtained wage, in the present situation over the minimum wage. On the second place in the subjects' preferences is the working climate (dynamic team, the space and used technology, organisation of events etc) and on the last place, the obtainment of benefits, such as flexible working hours, free subscriptions etc. We consider that it is normal that the level of the wage becomes the most important factor that operates in the option for a job, both in the case of the unemployed and in that of those who already have one, taking into consideration the low level of the wage in Bihor county, which does not offer the possibility of a decent living for persons in question and their families.

Staying within the same dimension that concerns the characteristics of the aimed job, we have considered that it would be relevant to identify the availability of the subjects to accept jobs that are at a big distance from their residence, starting from the facility offered by the government in order to motivate the employment at distances bigger than 50 km from residence.



**Figure 6:** The availability of the subjects to accept jobs that are situated at a distance from their residence

The graph presented suggests that more than half of the subjects (1 out of the 110 subjects that have answered this question) want a job at a distance of under 50 km from their residence, almost 30% are willing to get employed at a bigger distance from their residence, obviously if the job would offer the other conditions (acceptable wage, adequate working climate). The data thus shows that the facility stipulated by the social policies to encourage employment in areas that are at a distance from the residence can be successfully transposed in facts, provided that the promises that were made are punctually respected.

On the other hand, the subjects that are not willing to accept jobs that are at a bigger distance from their residence give reasons such as: the fact that they have a family and children that their parents' presence and surveillance; issues related to travelling and home that would mean supplementary time related costs but also financial resources; age, associated with health problems.

**Table 3:** Reasons for the refusal of accepting a job at a distance over 50 km from the residence

<b>Would you be willing to work in another locality if you identified a job adequate to your demanding? ...No, please mention which is the main reason for which you would not be willing to work in another locality?</b>	
	<b>Nominal values</b>
<i>Children-family</i>	78
<i>distance – means of transport- living</i>	24
<i>Age -health</i>	14
<i>Time spent on the road</i>	3
<i>Faculty</i>	1

### 3.2.3. Jobs aimed by the subjects

When asked about the aimed job there were only 200 out of 322 subjects that answered, which consolidates the presupposition that a quite significant part of those who take part in job fairs are not willing to get employed at that time, the aim of their participation being of another nature: probably a part of them wants to get informed, other take part just to socialize.

From those who answered the questions, the majority (92) look for jobs that require specialty higher education, explainable fact taking into consideration the big number of graduates from the three universities from Oradea (The University from Oradea, "Agora" University and "Partium" University). We consider that also the structure of the demanded specializations is relevant, in the sense that, on one hand there are specializations that provide the labour market with many graduates, annually, and on the other hand that, on the internal or international labour market there is a significant demand for those specializations. According to the data from Table no. 5, the aimed jobs that need graduation from higher education, in order, are: economist –accountant- manager (24), Engineer (Automation, electronics, environment, topographer) (21); IT (database administrator, programmer, computer technician, web design) (13) medical (doctor, nurse, pharmacist, physiotherapist) (11); Psychology / Human Resources (10); legal counsellor (8); Higher social worker (1); insurance inspector (1); teacher, Laboratory assistant (1); clerk (2).

Solicitations also appear related to jobs that need secondary education, vocational school or just secondary school.

**Table 4:** Aimed jobs arranged according to the demanded study conditions

No.	Study conditions	Aimed job
1.	Higher education	economist - accountant - manager (24) Engineer (Automation, electronics, environment, topographer) (21) IT (database administrator, programmer, computer technician, web design) (13) medical (doctor, nurse, pharmacist, physiotherapist) (11) Psychology / Human Resources (10) legal counsellor (8) Higher social worker (1) insurance inspector (1) Professor, laboratory assistant (1) clerk (2) Human Resources (5) artistic field (1) <b>Total 98</b>
2.	Secondary education, vocational school	skilled worker (plumber, locksmith, machinery mechanic, fork-lifter, carpenter) (13) administration (10) travel agent - travel worker (7) sales agent (7) computer operator - data entry operator (7)

No.	Study conditions	Aimed job
		Technician master (5) electrician (2) <b>Total 51</b>
3.	Without studies, secondary school or compulsory studies	production operator (31) security agent (4) Call centre - customer care (4) driver (4) carer (3) construction (2) drivers' coordinator (1) abroad (1) volunteer (1) <b>Total 51</b>

### Conclusions

- The main limit of the research refers to the fact that the sample involved in the study is relatively small, and the results cannot be generalised to the whole population in the county who is looking for a job. Nevertheless, taking into consideration the fact that the sample's structure is similar to that of the population looking for a job, we consider that the analysed data is relevant and could be generalised to the population of the county, made of people looking for a job and who take part in fairs organised by CAE.
- The CAE remains one of the essential institutions to which it is turned to in order to find a job, but it is more and more obvious the fact that the young especially turn more frequently to profile web sites. Moreover, the data has revealed the fact that turning to social networks remains one of the used methods, but being preferred by the people from the age category of over 40 years old and from the occupational point of view, especially by the unemployed.
- The most searched characteristic of a job remains the offered wage, especially in the conditions of low level of the salary in Bihor county, on the next places being placed the working climate and other benefits, such as discounting transport, flexible working hours etc.
- In the structure of jobs aimed by the people looking for one, the highest percentage is represented by the jobs that need higher training, given the specificity of the county that benefits from three universities that prepare the labour force at a superior level.
- Supplying specific information on the labour market, especially by the institutions with duties in this sense, could facilitate the increase of the occupation degree, respectively finding a job as suitable as possible for the labour force, idea that emerges from the study realized by Altman, Jager and Zimmermann (2015)



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## PROFILES OF ECONOMIC GRADUATES' INTEGRATION ON THE LABOR MARKET

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**Abstract:** Theories regarding youth participation on the labor market help us draw a detailed picture of the elements composing and influencing the labor market. Starting with individual factors and ending with policy level drivers, the labor market is analyzed both macro-economically as well as from the perspective of micro-economy. According to studies in the field there are different views regarding insertion on the labor market. It can be analyzed from the perspective of individual contribution to economic activity or occupation, that of age groups, of areas or economic sectors, of residential areas and gender, the view on occupations, production, incomes and many others. Often these criteria on which the labor market is structured are combined. The process of youth integration on the labor market is intensely studied in the scientific literature often under the influence of the International Labor Organization using the concept of "school-to-work transition". Our study is dedicated to the analysis of this transition of the graduates of the Faculty of Economic Sciences from University of Oradea. The professional path of young graduates of higher education remains a topic of interest both for scientific reasons as well as practical in order to improve employment policies. The main objective of this paper is to describe the integration on the labor market of economic graduates focusing on the before mentioned Faculty, creating profiles of this integration and finding correlates of a successful integration. This objective could be achieved through the analysis of data collected within a tracer study conducted with the graduates of our faculty in 2015. We have 247 valid answers to the questionnaire, and we base the analysis on these responses. The sample is far from being representative: students were self-selected from the students who wanted to answer to the questionnaire. Our conclusion is that graduates that find a job, even more whether that job is in the field, are students that worked during their studies, have parents with higher education and declare satisfaction with their studies.

**Keywords:** Employment; labor market integration; economic studies graduates.

**JEL Classification:** J2; J24; J21.

### Introduction

EU-wide data show that the employment rate among young people is experiencing various developments over time. Politics of stimulate employment as well as educational policies come to combat the friction of young people's insertion into the labor market. They seek to ensure, through active and passive measures, the increase in employment rates and investment in human capital. Also at European

level, Caroleo and Pastore (2007) emphasized that "youth experience gap" is the key factor explaining the very large difference between youth and adult unemployment rates.

Also, higher education institutions understand the importance of gathering information on graduates in order to assess and improve institutional quality. There is an increasing number of researchers who are looking to find indicators that are able to track graduates in the labour market (Boden and Nedeva, 2010; Varga, 2013; Krawczyk, 2015).

### **Theory**

The process by which young people integrate into the labor market is called in the literature as transition from school to work. The same definition is given by the International Labor Organization which classifies young people in transition from school to work as: those still in school, those who left school but did not find a decent job and those who completed transition from school to work. Obviously, the greatest attention is for young people in the second category. The preoccupation for decent employment of the ILO has produced a definition with a strong regulatory aspect that the transition is considered to be completed when a decent employment is achieved (Elder, 2009, p. 9). "Stable engagement" is a job with which the employee feels personally satisfied. (Elder, 2009; Matsumoto & Elder, 2010). A young person is in transition if he is in one of the situations: unemployed, employed with salary but without a contract, employed in temporary and unsatisfied, inactive and outside school but with the objective to work later. (Elder, 2009, p.10)

Based on the concerns about under-utilization of human resources, a term discussed and subject to measurement in international research is competences asymmetry (Skills mismatch in Europe, 2014). It refers to the various types of imbalances between the skills and competences offered and those needed on the labor market. Measurement of asymmetry can be achieved by comparing the level of training of those employed with the level of job they occupy, or by comparing the training level of those employed with the unemployed (Global Employment Trends for Youth 2013: A generation at risk, 2013).

The search and matching theory developed by Peter Diamond, Dale Mortensen and Christopher Pissarides has fundamentally influenced the way we look at the determinants of unemployment and, more generally, the labor markets. The major contribution is to develop a new approach to labor market analysis: 1) how workers and firms decide in common to match or to continue searching; 2) In the case of a match, how can the beneficiaries of that match divide between the worker's salary and the profit for the firm, 3) the fact that the firms decide to create jobs, and 4) how the matching between a worker and a firm can lead to an agreement against separation (Pissarides, 2011), (Mortensen, 2011).

Becker said that "education and training are the most important investments in human capital" (Becker, 1997). The theory of human capital, elaborated by G. Becker, also contains an explanation in terms of time of salary inequality. It is about the opportunity cost of time, because educating you means giving up free time and paid work. G. Becker opens his research to the new consumer theory, to which he attaches the salary rate as the cost of time at the market price.

The motivation of investing in human capital is to increase future earnings resulting from increased labor productivity. The profitability of investment in human capital depends on the amount of human capital and labor force available on the market.

Useful is the distinction between some complementary / alternative ways of thinking about human capital (Acemoglu, Gallego, & Robinson, 2014). According to Becker, human capital is directly useful in the production process. More explicitly, human capital increases worker productivity in all tasks, although eventually differentiated in different tasks, organizations, and situations. According to Gardener according to this point of view, we should not think of human capital as one-dimensional, because there are many dimensions or types of competencies. A simple version of this approach would emphasize the difference between mental abilities vs. physical abilities. Schultz / Nelson-Phelps viewpoint of human capital is viewed more as the ability to adapt. According to this approach, human capital is especially useful in dealing with "imbalance" situations, or more generally, with situations where there is a changing environment, and workers need to adapt to this. According to Bowles-Gintis, "human capital" is the ability to work within organizations, to obey orders, in short, to adapt to life in a hierarchical / capitalist society. According to this point of view, the main role of schools is to instill in individuals the "correct" ideology and approach to life. According to Spence, firms would pay higher salaries for educated workers, these workers will be more useful to the firm, they will listen to orders better and will be members of the company hierarchy.

The human capital perceived as those skills, talents and abilities of higher education graduates that contribute to productivity gains are key elements in the ever-growing society of growth (Sianesi & Van Reenen, 2003). The large number of years of study is no longer sufficient for a job, and individuals need to gain competencies through experience, training and other informal means (Rychen and Salganik, 2003).

Studies show that graduates of humanities, medical sciences, social sciences and law have lower job satisfaction than engineering graduates. Mathematics graduates were most satisfied with their workplaces (Garcia-Aracil and Van der Velden, 2007). Scarpetta et al. (2010) highlights the fact that temporary employment contracts are considered by most young people as a necessary threshold for moving towards a stable contract. At individual level, there is little evidence that married females in smaller labor markets are likely to be overeducated (Buchel, 2002).

School engagement is showed to facilitate a better school-to-work transition and also to give a better insight to students regarding their job expectations (Saveanu and Saveanu, 2012). There is no advantage on the labour market for the traditional students compared with the non-traditional. None of the other demographic variables as marital status or number of children affect the probability to have a job corresponding to their qualification (Hatos and Saveanu, 2016).

Our study is dedicated to the analysis of this transition of the graduates of the Faculty of Economic Sciences from University of Oradea. The professional path of young graduates of higher education remains a topic of interest both for scientific reasons as well as practical in order to improve employment policies. The main objective of this paper is to describe the integration on the labor market of economic graduates focusing on the Faculty of Economic Sciences, creating profiles of this integration and finding correlates of a successful integration.

## **Methodology**

Our data are collected from two sources that involved two cohorts: student and graduates. Data from the first section was obtained in a survey conducted within the project HERD: Higher Education for Social Cohesion Cooperative Research and Development in a Cross-border Area (HURO/0901/253/2.2.2.), research project

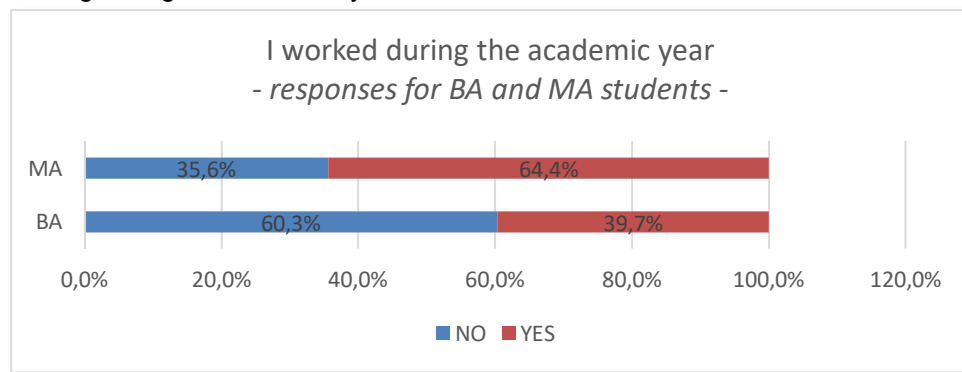
supported by the European Union European Regional Development Fund. Questionnaires were addressed to full-time students enrolled in BA and MA studies from the universities in the Romania-Hungary cross-border region. For the analysis in our paper we selected students from University of Oradea, 714 students (565 from BA and 149 from MA), enrolled in 11 faculties. The second set of data is from a survey conducted with the graduates of the Faculty of Economic Sciences in 2015, from which we have 247 valid answers to the questionnaire, and we base the analysis on these responses. The sample is far from being representative: students were self-selected from the students who wanted to answer to the questionnaire.

## Results

We followed three aspects that have implications for the students' employability after graduation: their previous working experience, their expectations regarding employment after finishing school and their current focus on getting a job after graduation.

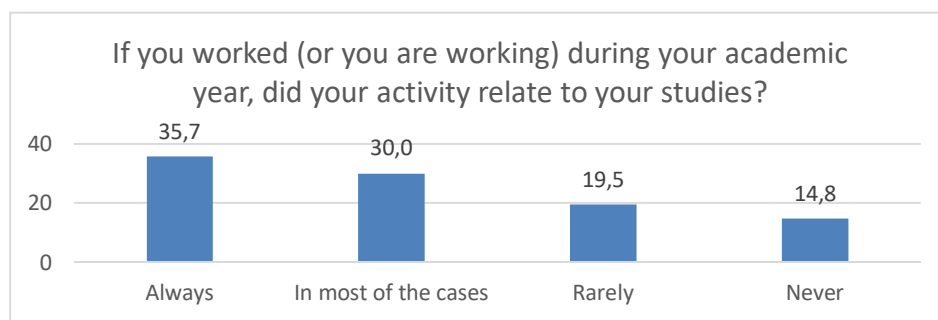
Regarding previous working experience 44.9% students already have working experience, as they worked during the academic year.

There is a significant difference (for ChiSquare = 28.2,  $p < 0.000$ ) regarding the employee status for BA and MA students: there are more MA students who are working during the academic year.



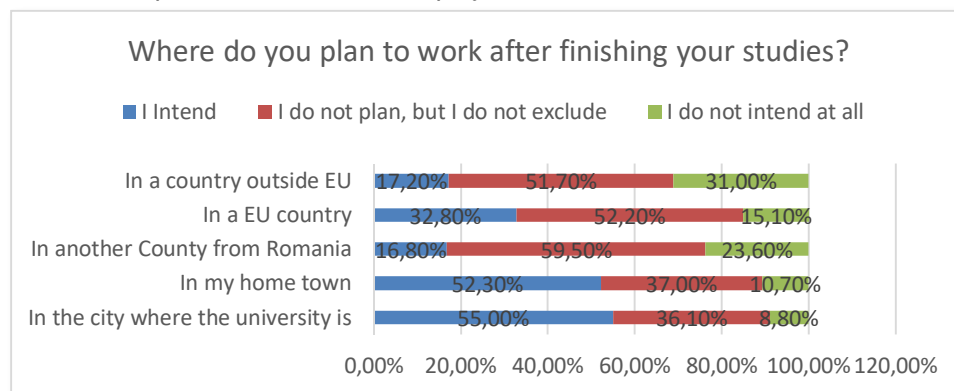
**Figure 1.** Working during the academic year

More importantly, most of them work in a field related to their studies. This signifies that their experience will complement their studies, increasing the chances for future successful insertion on the labor market.



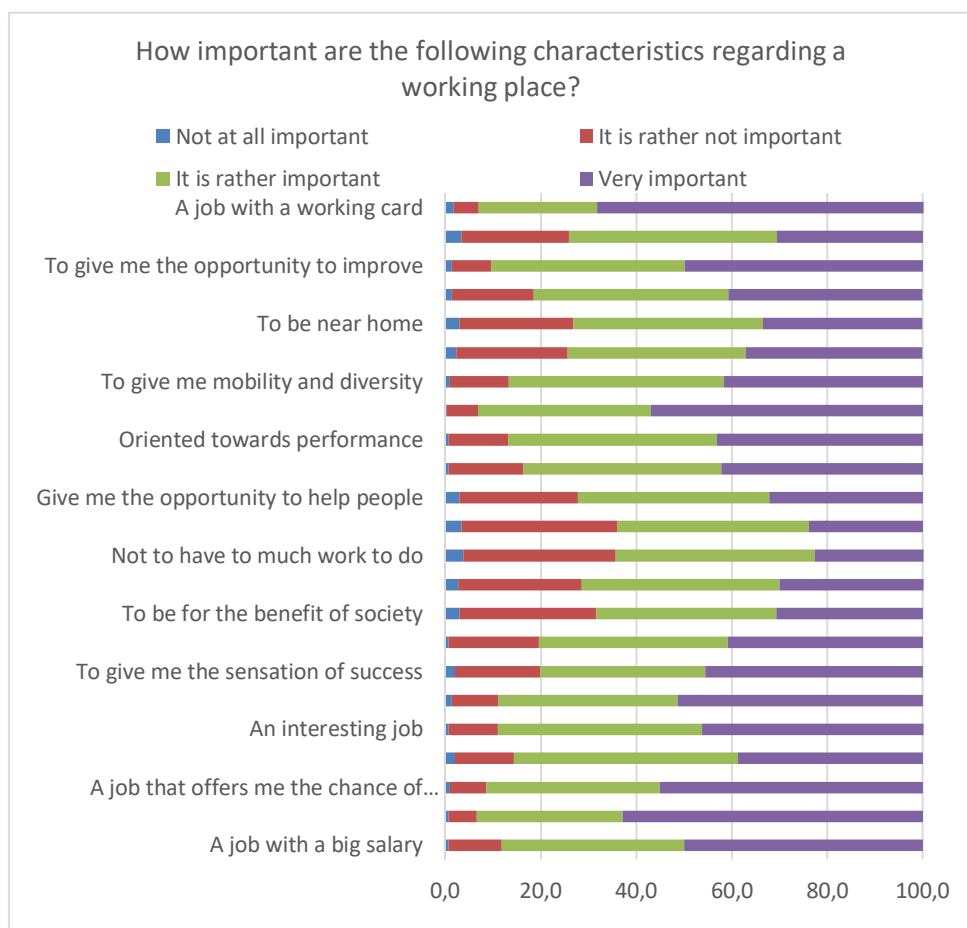
**Figure 2.** Work activity related to your studies

*Plans and expectations for future employment*



**Figure 3.** Where do you plan to work after finishing your studies?

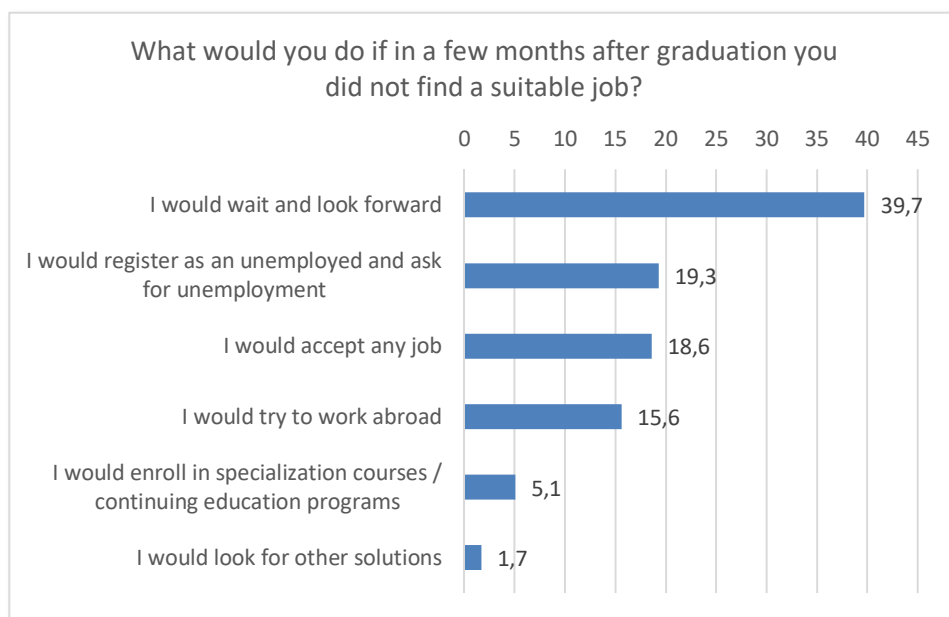
Students intend in a very large proportion to work in the city where the university is or in their home town. It is important for them to have stability and legal basis for employment. Also balance between work and family time, providing opportunity for personal development and chances for advancement. The responses are presented in Figure no. 4



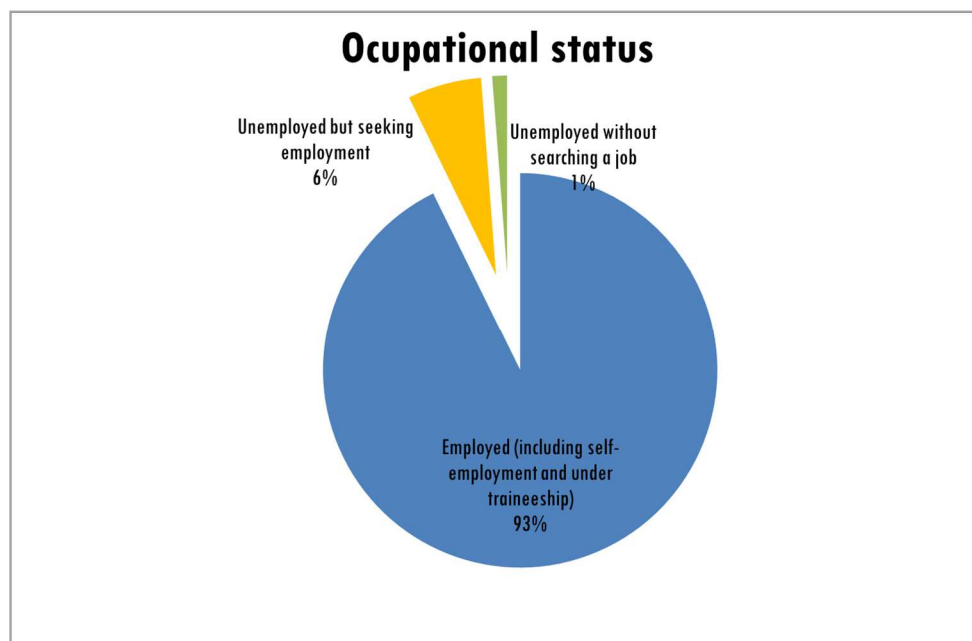
**Figure 4.** Important characteristics regarding a working place

*Current strategies for getting a job after graduation*

53.7% of students already started to look for a job for the period after graduation. If they will not find a suitable job in a few months after graduation they will look forward or will register as an unemployed. Only 5,1% will enroll in specialization courses or continuing education programs.



**Figure 5.** What would you do in a few months after graduation you did not find a suitable job?

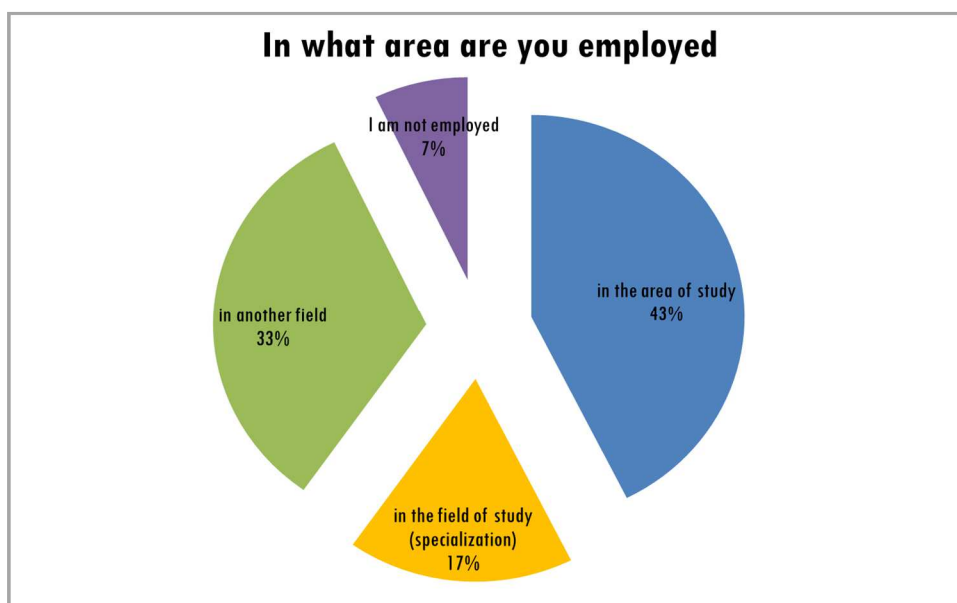


**Figure 6.** Occupational status

The answers to this question were recoded into employed or unemployed for further analysis however no significant relationships could be highlighted between their



current occupational status and: previous work experience, educational level of parents, as well as either of the demographic information: gender, age, area of residence.



**Figure 8.** In what area are you employed?

There is a significant relationship between the field of employment and the assessment of the level of relevance of the competencies acquired during their studies for their work (*To what extent do you consider you can use the information and competencies acquired in school at your job?* on a scale from 1 to 5). The mean answer of the people working in area of study (economy) is of 3.03, significantly higher (sig.=0.00) to those working in other fields (2.05) or the unemployed (2.55). The most efficient way of searching for a work place is by acquaintances.

**Table 1.** Searching for a work place

	Frequency	Percent	Valid Percent
I have applied for employment	80	19,1	19,1
we contacted employers on our own initiative	18	4,3	4,3
I was contacted by an employer	27	6,5	6,5
with the help of family, friends or acquaintances	92	22,0	22,0
Agency of employment	4	1,0	1,0
private recruitment and placement agencies	6	1,4	1,4
through the university	5	1,2	1,2
through social networks	8	1,9	1,9
discussion groups and email lists	1	,2	,2
written press	8	1,9	1,9

online job portal	63	15,1	15,1
job fairs	8	1,9	1,9
I work for family business	9	2,2	2,2
I opened my own business	11	2,6	2,6
I work at the same employer as before graduation	35	8,4	8,4
I do not have a job	36	8,6	8,6
Total	418	100,0	100,0

In this section we search for correlations which can explain the relation between working in the field of study and different variables. Data shows that there is no correlation between the mother's level of education and the fact that is working in the field of study. Regarding the father's education level there is a correlation, those working in the field have an average of the father's educational level ( $M=3,099$ ; Std. Dev.=0,877) significantly higher than those who do not work in the field ( $M=2,844$ ; Std. Dev.=0,842).

There is also a correlation between working in the field of study and the year of obtaining the diploma, those who work in this field have an average of the year of obtaining the diploma statistically significantly lower ( $M = 2011,7$ , Std Dev = 2,95) compared to those who do not work in the field ( $M = 2012,4$ , Std Dev = 2,80).

There is no difference between the average duration of the first job search among those working in the field and those who do not.

There is no difference in the average number of jobs so far between those working in the field and those who do not. There is no difference between the average search time of the first job between those working in the field and those who do not. Do not differ in the average number of jobs so far between those working in the field and those who do not.

There is no correlation between working in the field and worked during the studies. It is associated with gender: there is a greater likelihood that women will work in the field. (Pearson Chi-Square=5,64; sig.=,012).

There is a significant relationship between the field of employment and the assessment of the level of relevance of the competencies acquired during their studies for their work (To what extent do you consider you can use the information and competencies acquired in school at your job? on a scale from 1 to 5). The mean answer of the people working in area of study (economy) is of 3.03, significantly higher (sig.=0.00) to those working in other fields (2.05) or the unemployed (2.55).

## Conclusion

Regarding the previous working experience students already have working experience, as they worked during the academic year. After finishing the studies they plan to work in the city where the university is or in their home town and most of them already started searching for a job.

The limits of our study are related to the fact that the sample is far from being representative because our graduates were self-selected from the graduates who wanted to answer to the questionnaire.

Graduates that find a job, even more whether that job is in the field, are students that worked during their studies, have parents with higher education and declare satisfaction with their studies. There is no difference between the average search

time of the first job between those working in the field and those who do not. There is no correlation between working in the field and worked during the studies. It is associated with gender: there is a greater likelihood that women will work in the field. There is a significant relationship between the field of employment and the assessment of the level of relevance of the competencies acquired during their studies for their work.

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## CONSIDERATIONS REGARDING TARGET COSTING METHOD APPLICATION WITHIN THE ELECTRICAL LIGHTING INDUSTRY

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**Abstract:** *This article aims to highlight the Target Costing method, and the possibility that it may be used in the electrical lighting industry. The article analyses the Target Costing concept method starting from speciality literature, right since the time of the method so far. By careful examination of the literature it is shown that this method actually is a method of management for economic entities. To correlate the speciality literature, the financial results have chosen as example, by implementing the method of electrical lighting equipment industry within the economic entity Electromax S.R.L. By applying Target Costing method, the company plans in advance the stages of price, cost and product targets which they want to achieve. If a product can not comply with these criteria then the product will be phased out completely. This method is a powerful tool that the management team can use to monitor the products entering the design team and all the product's life cycles. Target Costing method allows planning the cost of products before they are placed into production, which allows products whose margins do not generate profits or generate insufficient profits not to be placed into production. Specifically with Target Costing method, producers will be able to monitor and control the various stages of the product life by analysing its costs from its definition phase, depending on its characteristics and its selling price. Applying the Target Costing method within the economic entities in the industry of electrical lighting, as a method of cost calculation, will help to ensure that new products will be profitable throughout its life cycle, allowing tracking of costs over its lifecycle, comparing them between forecasts and achievements, and reporting to the retail price competition. With Target Costing, the term of the product design will be reduced, the development costs can be lowered and in this way it ensures swift amortisation thereof, allowing for better organisation of relations with the suppliers and customers of the economic entity; providing mobilisation and motivation of all powers within the economic entity, through an approach that allows for greater competitiveness.*

**Keywords:** *Target-Costing; light fixtures; managerial accounting; profit target.*

**JEL classification:** *M41.*

### **1. Introduction:**

Leading an entity means, on the one hand, to know thoroughly the current activity and intervening with operational decisions in managing it and on the other hand, foreshadowing future developments and developing forecasts outlining the development goals ahead of that entity", (Briciu S. 2006)

In the market economy, the effectiveness of any economic entities depends essentially on the quality of the management to understand and apply the principles, methods and techniques of modern management. Quality management is an

essential condition for economic entities to obtain competitive advantages and to withstand the competitive mechanism. The previous statement is even more important since in recent years the primary factor for the bankruptcy of a company is the incompetence of the managers and management mistakes caused by errors in decision, (Emil Homormonea, Alexandra Daniela Socea 2011). Nizard considers that "The decision is a conscious action selected from a number of choices, in order to reduce the perceived discontent of a problem. Mintzberg analyses the decision as a process that involves permanently the option to choose.

## **2. Research methodology:**

Research is normally made up of five parts: review of the literature; development of theories; reflection, testing and integration of theories and concepts. Given the theme addressed by us, the research focused on approaching both theoretical and practical approach applied.

In the first phase, the research aimed at presenting a synthesis of existing literature in the field, and we focused on documentary research on the method of Target Costing. Initially, we wanted to address a strictly qualitative research, but we concluded that such research would limit the relevance and the validity setting approaches and research results, so we expanded research methods to the quantitative methods too.

Out of the research methods that we used in this paper, we may include: document analysis, comparative method, observation and case study.

## **3. Review of the literature**

The Target Costing method, (Burrows G., Chenhall R.H. 2012). is a method of pricing based on market enterprises. This is considered as a tool for cost management, reducing total costs of production, within all production departments, technical, research and design. Target Costing initial concept began to be presented in Japan in 1960, being used for the first time by the Toyota company, (Tanaka T. 1993).

This concept was developed slowly, because many companies have implemented Target Costing method in response to changes in the external environment. According to this method the cost of the product is, adapted to the price, the latter does not depend on its cost, so it is a modern method of management that uses evolved techniques for market research, value analysis, reducing diversity, and a method of costs calculation. In Japan, the most important event in use of Target Costing method was the economic collapse of 1990 and 1991. After that moment, many companies have realized how difficult it is to meet customer expectations in terms of lower prices. So they updated methodology for Target Costing method by significantly increasing the required data as precise cost estimates, (Kim W., Ansari S., Bell J., Swenson D. 1999). According to the CAM-I definition, Target Costing represents „ *a set of management tools and methods designed to direct the design and planning for new products that provide a base for the subsequent phases of exploitation and ensuring that their products reach their profitability targets throughout their lifetime*. Target Costing method's stake is in its lifetime, *anticipated cost determination is in this respect fundamental, focused in the design stage, for keeping costs under control, even if uncertainties are large*, (Dumitru. M. Calu D. A 2008) the purpose of the target costing method is to identify the cost of production for the desired product, so the sales generate the profit margin desired. Target cost method focuses on reducing the cost of a product through changes in its design,

being applied during the design phase of the product lifecycle (Sorinel Căpșuneanu, Sorin Briciu, 2011) *their lifecycle*” CAM-I (Consortium for Advanced Manufacturing- International and SMAC Society of Management Accounting of Canada 1994).

#### **4. Case study on the Target-Costing method to S.C. Electromax S.R.L**

The initial activity of the entity was the production of lamps for underground mining area. Subsequently, due to the easing of activity in the underground mining industry, the company was reoriented to other areas, being in the position today to manufacture products in areas such as: Lighting for potentially explosive environments; Industrial lighting; Architectural lighting; Commercial lighting; Office lighting; Street lighting; Aviation lighting, comprising: aerodrome, heliport and obstacle lighting;

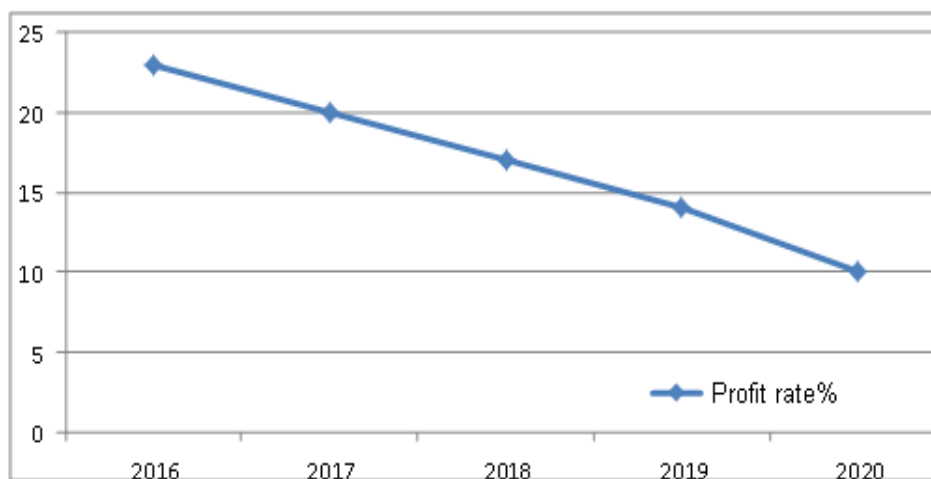
All these products are made exclusively with LEDs. With extensive experience in the design, manufacture and testing of high intensity LED products. The company has grown steadily, widening its production facilities and the provision with equipment, becoming one of the leading manufacturers of lighting fixtures in Romania, having a significant shift towards research, development and innovation in the production of LED lighting systems. Company's vision is to develop and improve in an innovative and competitive manner, so it can record outstanding achievements in the process of LED lighting, in diverse areas and with many applications. Lighting industry is going through a stage where you need to maintain a balance between energy efficiency, innovation and customer expectations, creating opportunities in the competitive environment.

This leads to good opportunities in all aspects of the market, creating a healthy business environment. Global market size exceeds 110 billion dollars, following market LED lighting to occupy by 2020, 45%, which is a great outlook for companies that decide to share this market, (<http://www.nullylighting.co.uk/wp-content/uploads/2017>). SC Electromax SRL's activity since the early years of the company, was focused on the satisfaction of its customers requirements. The whole range of sold products was set according to customer requirements, the company showing interest in the business for both current customers and potential customers. Regulatory environment (REGULATION(CE)NR.245/2009 from the commission since 18 of March 2009 [<http://eur-lex.europa.eu/LexUriServ.do?uri=OJ:L:2009>]), it is translated for Electromax as an opportunity, as LED lighting systems are a viable alternative, in each of the fields for each of the lamps subject to EU regulation (Specifications can be found in the European Commission regulation mentioned above) Existing customers of Electromax SRL is represented by companies from Romania, but also from the European Union countries and also non european .S.C. Electromax SRL applies the method of calculation of orders costs. This is a traditional method being applied by economic entities or individual serial production. To show how to apply the Target Costing method I chose, for example the,, Apollo II “ product.

Electromax SRL manufactures the Apollo II product for which the following estimations have been made :

**Table 1:** Preview of quantity, price, product turnover for Apollo II

Indicators	Year 2016	Year 2017	Year 2018	Year 2019	Year 2020
Conditions forecast	3000	2800	2500	2000	2020
Selling price (lei/piece)	1.002	936	902	668	635
Profit rate	23 %	20 %	17 %	14 %	10 %

**Figure 1:** The evolution of the rate of profit

Source: Own processing

The product decomposes in the following components. I only chose components which have the highest significance and for each part of the following, we calculated the costs using a absorber type method.

**Table 2:** Estimative cost estimation for the parts used to produced one Apollo II

Components	Estimated cost (lei/ piece)
Component 1( Aluminium profile and other materials)	265
Component 2 (Driver IP 65)	235
Total product	500

After the market analysis, Electromax identified three features of the product which are popular among customers and with the following degrees of importance:



**Table 3:** Identifying Apollo II's appreciated features after market research

Functions	Degree of importance
Design	5
Functionality	20
Resistance	15
Total	40

Electromax's designers determined whether the parts of the product have contributed to its functions as follows:

**Table 4:** The significance level of the Apollo II components

Components	Design	Functionality	Resistance
Component 1	30 %	90 %	50 %
Component 2	70 %	10 %	50 %
Total product	100 %	100 %	100 %

We determine the target cost of the product and identify the solutions to reduce the level of the target cost.

Determining the average price (  $\bar{p}$  ) during product's selling period (of the targeted cost)

$$\bar{p} = \frac{\sum C_i}{\sum Q_i} = \frac{3000 \times 1002 + 2800 \times 936 + 2500 \times 902 + 2000 \times 668 + 1500 \times 635}{3000 + 2800 + 2500 + 2000 + 1500} = \frac{8.170.300}{11.800} = 692,39$$

**Table 5:** Determination of the margin over the life of the product

Fiscal Value	3.006.000	2.220.800	2.255.000	1.336.000	952.500	8.170.300
Profit rate	23 %	20 %	17 %	14 %	10 %	
Profit	699.380	524.160	383.350	187.040	95.250	1.881.180

$$\bar{p}_{\text{profit}} = \frac{\sum \text{profit}_i}{\sum Q_i} = \frac{1.881.180}{11.800} = 159,42 \text{ lei/piece}$$

We determine the average rate of profit (  $\bar{r}$  ) on product's lifetime:

$$\bar{r} = \frac{\sum \text{profit}_i}{\sum C_i} \times 100 = \frac{1.881.180}{8.170.300} \times 100 = 23\%$$

We determine the weight of the target cost price ( % C )

% C = 100 % - 23 % = 77 % Target cost calculation:

Target Cost = Targeted selling price - Targeted margin profit

Target Cost = 692,39 - 159,42 = 532,97 lei/piece.

Difference = Estimated cost - Target Cost = 500 - 532,97 = 32,97

The difference between the estimated cost and target cost is 32.97 lei, which means that current production costs must be reduced by this amount in order to reach the target cost of 500 lei.

**Table 6:** Calculation of the share positions in the overall usability of the property.

Functions	Importance degree	Share in percent
Design	5	$(5/40) \times 100 = 12,55 \%$
Functionality	20	$(20/40) \times 100 = 50 \%$
Resistance	15	$(15/40) \times 100 = 37,5 \%$
Total	40	100 %

**Table 7:** Determination of the target cost of the product functions

Functions	Share in the cost of the product	Targeted cost per function (lei/ piece)
Design	12,5 %	66,63
Functionality	50 %	266,48
Resistance	37,5 %	199,86
Total		532,97

Next, we calculate the target cost at the component level, by multiplying the target cost function with the weight of the components of the product. Apollo II contributes to the realization of these functions.

For Part number 1: design  $66,63 \times 30 \% = 19,98$  lei; functionality  $266,48 \times 90 \% = 239,83$  lei; resistance  $199,86 \times 50 \% = 99,93$  lei

For Part number 2: design  $66,63 \times 70 \% = 46,64$  lei; functionality  $266,48 \times 10 \% = 26,65$  lei; resistance  $199,86 \times 50 \% = 99,93$  lei

**Table 8:** Calculation of the target cost of the product at the components level

Target Cost ( lei/piece)				
Components	Design	Functionality	Resistance	Total
Component 1	19.98	239.83	99.93	354.74
Component 2	46.64	26.66	99.93	173.23
Total	66.82	266.49	199.86	532.87

Calculation of estimated costs deviations from target costs on each product component.

**Table 9:** Calculation of estimated costs deviations from target costs

Components	Estimated cost(lei/ piece)	Target Cost (lei/ piece)	Deviations (lei/piece)
Component 1	265	359,74	-94,74
Component 2	235	173,23	61,77
Total product	500	532,97	32,97

After the result of the analysis, the target cost for component 1 is above the current cost and the cost for the component 2 is below the estimated cost.

To achieve the target costs, no need to act on the component 1 to reduce the cost thereof. To determine the percentage of importance for each associated component, we proceed to an increased share of each function with the contribution that they bring to achieve each component. So we still calculate the target cost index expressing the relationship between the weight of the components and the share in the costs of the same components .

In order to achieve this index, we follow the next steps :

For component 1: design  $12,5 \times 30 \% = 3,75 \%$ ; functionality  $50 \times 10 \% = 45\%$ ; resistance  $37,5 \times 50 \% = 18,75\%$

For component 2: design  $12,5 \times 70 \% = 8,75\%$ ; functionality  $50 \times 10 \% = 5\%$ ; resistance  $37,5 \times 50 \% = 18,75\%$

**Table 10:** The percentile importance of Apollo II's components

Component's degree of importance				
Components	Design	Functionality	Resistance	Total
Component 1	3,75	45	18,75	67,5%
Component 2	8,75	5	18,75	32,5%
Total product	12,50	50	37,5	100%

Next we proceed to the correlative analysis of the costs and the importance of each component in achieving the percentile functions:

**Table 11:** Correlative costs analysis and the importance of Apollo II product components

Components	Estimated cost(lei/piece)	Shareof the product's cost (%)	Component's degree of importance (%)	Target cost indices
Component 1	265	53	65,5	$67/53 = 1,26$
Component 2	235	47	32,5	$32,5/47=0,69$
Total	500	100	100	-

The significance of the target cost index can be interpreted in the following way (K.Ebbecen, L. Possler,R.Ristea).

### 5. Conclusions and research perspectives

Target Costing method involves a significant change in manufacturing of electric lighting equipment, it helps managers and management accountants operate in a competitive business environment, which must accept higher prices compared to previous years. The Electromax SRL Economic entity is directed both to niche markets and to mass markets. *Niche markets are characterised by* specific products: smaller quantities of products; plus great value; volatility in sales; reduced competition; requires expensive certification; requires highly specialised staff; expensive marketing; stock and staff management problems; high delivery deadlines; manufacturing preparation is very expensive. Mass markets are characterised by: production for consumers; big quantities of products; lower capital gains per product; constant sales; does not require special certification; low or average specialisation of staff; higher product stocks; lower marketing costs; possibility for stock sizing ; delivery from stock. In such circumstances, the economic entity, Electromax SRL is affected both by increasing nationally and by increasing worldwide, for which could respond faster to a competitive environment by addressing the benefits of Target Costing method. This method allows obtaining benefits through previous planning costs, and most importantly, accounts management by studying the profitability and financial position on the market. Target Costing method allows cost planning for products before they are placed into production, which allows products whose margins do not generate profits or generate insufficient profits not to enter in the manufacturing phase. Specifically it is the following aspects that we need to consider: pursuit and mastery of different phases of the product life; It allows to analyse costs from the design phase of the product, depending on its characteristics and the selling price; it ensures that new products will be profitable throughout their lifecycle( tracking cost comparison between forecasts and achievements, and reporting to the retail price competition); allows reduction of deadlines for designing new products; allows reducing the development costs, thus, ensures swift amortisation; It allows for better organisation of relations with suppliers and customers of the economic entity; mobilisation and motivation of all powers within the economic entity, through an approach that

encourages greater competitiveness. Given the evolution and prospects of the electric lighting equipment industry, we encourage economic entities in this area to use as a method of costing, the Target Costing method, given the main advantages of the method, namely: focused on customer needs, and allows management targeting an economic entity by integrating the powers of different functions of the economic entity, and a forecast of the effects of the decisions and future results. In conclusion, the Target Costing method creates a strong link between planning, control and current activity of SC Electromax SRL in order to penetrate the market efficiently by using product sales as the main way, complying to the strict specifications, requirements and standards of each product.

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## COMPARATIVE ASPECTS REGARDING THE SOCIAL ECONOMY IN ROMANIA AND UKRAINE

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**Abstract:** Romania and Ukraine are two countries located in geographical proximity, exiting the communist era at the end of the previous century; it is safe to assume that the exit generated similar needs regarding the support of the social economy. The paper briefly presents the evolution of the social economy in Europe and Romania in terms of its characteristics, but also through its development and its diversification. Two perspectives, two approaches on the social economy: Romanian and Ukrainian are presented and analysed, considering not only the geographical proximity but also common elements of the historical destiny. Definitions given to the term social economy in the literature of the two countries, are similar in terms of both similarities and differences, which implies the approach of the social economy, specific characteristics.

**Keywords:** social economy; Romania; Ukraine; definitions; characteristics; similarities; differences.

**JEL Classification:** L31; F00; J14; J54.

### 1. Social Economy in Europe and in Romania

After the second world war, Europe has recorded major changes which mainly aimed at the economic reconstruction; the most important changes objectified as industrialisation, urbanisation and demographic revival, as a result of the "baby boom" phenomenon.

Industrialization brought to society beyond obvious benefits a series of shortcomings that focused primarily on the most vulnerable segments of society: the poor people for which education, vocational training was inaccessible, and found it hard to find a job in the new economy, people with disabilities, women. This situation has generated both practical concerns for the constitution of entities (cooperatives, associations, mutual societies) to meet the needs of these social categories, as well as theories of economists on the need for a moral dimension of the economic activity (Ștefănescu, Miculaiciuc, 2016).

Urbanisation and demographic growth have accompanied the industrialisation by supporting and feeding it. At the same time, a society polarization occurred, and implicitly poverty within one part of the population, which was unable to adapt to the economic, technological and educational development rhythm. Unlike the rest of the population, the solution for this stratum, to which disabled persons, as well as other disadvantaged social segments were added, was the social economy.

The social economy terminology appeared in France at the beginning of the XIXth century and spread all over Europe and subsequently abroad in the two Americas, as well as in Asia. The social entrepreneurship inspired itself from the purposes and goals of benevolent associates, respectively charity support purposes for those having limited financial means. However, unlike the traditional or charity

associations, social enterprises did not depend on subsidies or donations; they made revenue within a production process involving resources and aiming at obtaining consumer goods and services and thus having an entrepreneurial and marketing section (Ștefănescu, Miculaiciuc, 2016).

Research shows that in "Sweden, the UK, and Spain, sales and/or fees were clearly the most important source of capital, (followed by grant finance (UK and Spain) or investors' capital (Sweden). In Hungary, sales and/or fees and grant finance were nearly of equal importance (38% versus 36%). In Romania, by contrast, the most significant share of liquidity hailed from grant finance (52%), followed by sales and/or fees (28.2%) and private donations" (SELUSI, 2011).

Today, the social enterprises are of interest for the European bodies which finance the creation and sustainability of the former by the means of the European Social Fund, aiming to increase the quality of life, to reduce inequalities and social exclusions, as well as to ensure the sense of service regarding all persons that are fit for work.

Therefore, the documents of the European Union seek for the modernisation of the European social model, human investment and elimination of social exclusion (Lisbon Agenda, 2000), respectively the improvement of Europe "into a smart, sustainable and inclusive economy, delivering high levels of employment, productivity and social cohesion" (Europe 2020, p.10)

Despite the positive application of the Lisbon Agenda, which followed the adaptation of the European development model to the new context by modernising the same instruments, the 2008-2011 crisis highlighted the need to adopt a new strategy. The 2020 Europe Strategy suggests a new social-economical model offering solutions to the new challenges of the beginning of a new millennium: "the globalisation of the economy, the low rates of economic growth, the complexity of society, and growing demands for new services" (European Commission, 2013, p.15).

Currently, we witness a diversification of the activity of social economy enterprises, shifting to fields such as: "the provision of new forms of educational, cultural, environmental, and public utility services, as well as food production, distribution and consumption" (European Commission, 2013, p.41), depending on the needs and interests of community and society.

Researches show that in Romania there have been specific activities within the social economy activity for over a century (Arpinte, Cace, Scoican, 2010), and such activities have been present including during the communist era: workmanship cooperatives, credit or production cooperatives, CAR's, NGO's, protected enterprises (e.g. Work for disabled), respectively jobs that were owned by the disabled (e.g. almost all masseurs were blind), even if they were actually under the trusteeship of the state, reason for which the purpose and method of organization and development of the activity were queer (Oșvat, Ștefănescu, Jurj, 2012).

In the European Union, the social economy sector "sums up 2 million units (i.e. 10% of the total of businesses in Europe) using over 14.5 million paid workers (i.e. the equivalent of 6.5% of the working population in EU)" ([www.monitor.coop](http://www.monitor.coop)), while in Romania this sector comprises over 67.000 of social enterprises offering over 159.847 workplaces, representing 3.3% of the total of workers (Institutul de economie socială, YEAR). The considerable inequalities as compared to the EU are due to the relatively tardive debut of the entrepreneurship concerns within the social economy entrepreneurship in our country, as well as the lack of legal frame for the regulation of social economy.



As the social economy law is compiled in 2015, together with structural funds accessed within this segment, there appear perspectives for the development of social economy enterprises and implicitly for a better insertion of disadvantaged groups on the labour market, directly impacting the increase of standard of living of the same (Ștefănescu, Miculaiciuc, 2016).

The 2020 EU strategy defines the social economy entrepreneurship as a serious partner of the civil society of the state (Zamfir, Fitzek, 2010, p. 8), as the social economy assessment and monitoring represent a challenge for both beneficiaries and structures involved in the development of projects within the field (Katsikaris L., Parcharidis I., 2010).

## 2. The concept of social economy from a Romanian and Ukrainian perspective

In order to understand the specific method by which the social economy concept is approached and used in the Romanian and Ukrainian area, we have compiled a brief comparative outline of Ukraine and Romania in terms of geography, history, economy, demography, mentality and governing in order to highlight the similarities and differences between the two countries, showing implications upon the existence and development of the social economy. Further we outlined several definitions given by Romanian, respectively Ukrainian authors, aiming to observe the defining elements of the social economy as according to the view of the two categories of authors. We have insisted upon the legislation regulating the social economy in the two countries, the number of social economy units per fields of activity and types of social economy organisations, as well as a few social economy indicators in the two countries.

We have opted for a comparative study on the social economy in Romania and Ukraine for several reasons: the two countries are in geographical proximity, they came out at the end of the last century from the communist era, which, we can suppose, generated similar needs to support the economy social. In addition, knowing the Ukrainian language, we had access to a series of papers and documents on this topic, on the issue of social economy, which allowed me to make comparisons and surprise the similarities and differences between the two countries on the mentioned issue.

**Table 1.** Similarities and differences between Romania and Ukraine.

Criteria	Similarities	Differences
geographical	Located in SE Europe	Ukraine has a surface almost 3 times larger than Romania The population of Ukraine is 2 times larger than that of Romania Unlike Romania, which has a proportionate relief compound of mountains, hills/ table lands and depressions, in Ukraine the mountains occupy a small surface, followed by depressions and table lands
historical	Former communist states, members of CAER, both exited the "communist era"	Ukraine was part of the Tsarist Empire, while Romania, divided into the three provinces, Țara Românească, Moldova and Transylvania, had different dependency

Criteria	Similarities	Differences
	in the '90s, trying to build a democratic society	relations with the Ottoman Empire (the first two of them), respectively with the Austro-Hungarian Empire (the last of them) Both states became communist, Ukraine as part of the Soviet Empire, Romania as independent state.
economic	Poor infrastructure and transportation Strong economical branches: agriculture and IT The ratio of the population living under the poverty limit is similar, over 22% in Romania, over 24% IN Ukraine.	The economic and good governing systems in Romania are superior to Ukraine. As compared to Romania, Ukraine's GDP is \$ 8-9000 (PPP)/ per head of the population, while in Romania it is over \$ 22.000/ head of population (PPP) The inflation rate is very low (negative in the past two years) in Romania, while in Ukraine it is maintained at high levels (48.7% in 2015, respectively 13.5 in 2016) In Romania, we witness a constant economic growth within the past years (3% in 2014, 3.8% in 2015, 5% in 2016), while in Ukraine, merely in 2016 there was recorded a slight economic growth after significant decreases within the previous years (-6.6% in 2014, -14.3% in 2015, 2.3% in 2016) The unemployment rate in Romania has been between 6 and 7% within the past two years, while in Ukraine it varied between 9 and 10%. However, the youth unemployment rate is similar in the two countries, both recording between 22 and 25%. The most spectacular economic difference between the two countries is found within the budget plan: the Romanian budget for both income and expenditure is double as compared to Ukraine. A similar situation is recorded in the case of exports value, which is double in Romania as compared to Ukraine within the last two years, as concomitantly with their orientation: towards Western countries for Romania, respectively towards Russia, Turkey, China for Ukraine.
demographic	Significant demographic decrease	Romania has over 21 mil. inhabitants, Ukraine has over 44 mil. inhabitants. The over 70% urbanization rate of Ukraine exceeds the Romanian rate.

Criteria	Similarities	Differences
governing mentality	Corruption Bureaucracy Institutions' fragility and population's lack of trust into politicians and institutions Semi-presidential republics	As well as in Romania, corruption in Ukraine appeared within the context of moving from centralized economy to market economy, with a mostly chaotic development of denationalisation due to the lack of a coherent legislative frame and efficient monitoring bodies for this process. Unlike Ukraine, especially after EU integration, in Romania there have been created specialized institutions to combat corruption (NAD), concomitantly with an EU monitoring through CVM (cooperation and verification mechanism). In Ukraine, the press is in the hands of oligarchs, who use it for electoral manipulation purposes.
legislative	The regulation of social economy is at an incipient stage	In 2015, in Romania there has been compiled and applied the Law regarding the social economy, unlike in Ukraine, where legislative elements are identified as regulating the operation of social economy within various non-specific normative acts (Civil Code, Financial Code, Ukrainian Constitution, Law regarding social services, Law regarding social protection for disabled persons in Ukraine, Law regarding charity activities and organizations, etc.).

Source: <http://www.indexmundi.com>

As it can be observed, despite certain similarities between the two countries in terms of geography, demography or politics, the differences are multiple, and this will also reflect upon the perspectives regarding the social economy. Further we will present a few aspects regarding the social economy in the two countries:

**Table 2.** Social economy in Romania and Ukraine

Social economy aspects	Romania	Ukraine
Characteristics of social economy enterprises	Private entities that are not controlled by the public sector Formal organizations – with decisional autonomy and legal personality, freedom of association Created to respond to the needs of their members by	Social impact Innovation Auto-reimbursement and financial stability Activity extension and dissemination of experience Enterprising approach Non-profit enterprises (Fund for regional social programs)

<b>Social economy aspects</b>	<b>Romania</b>	<b>Ukraine</b>
	<p>applying the self-helping principle</p> <p>They are market producers</p> <p>Limited distribution of profit</p> <p>Democratic organizations, all members participate in decision making (Barea, Monzon, 2006, p. 33-35)</p>	
Number of social economy units	70.000 organizations, 55% of which within the non-governmental sector (which also provides 70.000 workplaces)	There are approximately 40.000 recorded NGO's within 47 mil. population: only 10% of them are active. Over 50% of the NGO's do not have permanent personnel
Social economy units' activity fields	<p>Workmanship</p> <p>Consumerism</p> <p>Credit</p> <p>Reciprocal help</p> <p>Agriculture</p> <p>Social/ charity 22%</p>	<p>The most active NGO's focus their activities upon the protection of public interests and lobby (advocacy) (45%) and training and consultancy services (41%). Other activities are represented as follows: information spreading - 39%; education - 37%; social services - 28%; research and analysis - 23%; charity - 19%; rehabilitation - 10%; social and political recommendations - 10%; implementation of grant programs - 8%.</p>
Types of social economy organizations	<p>Cooperatives(2228 cooperatives: workmanship, consumerism, credit, agricultural)</p> <p>Associations and foundations (33.670 units)</p> <p>CAR (2767 units)</p> <p>Companies held by social economy organizations (682 units)</p>	<p>Central and local public administration authorities and other public organizations financed from national or local budgets;</p> <p>Charity funds and charity organizations, including NGO's focusing on environmental activities, retreat, amateurs, cultural, educational and research activities;</p> <p>Humanitarian associations for disabled persons and their local offices, created in</p>

Social economy aspects	Romania	Ukraine
		conformity with the Ukrainian law regarding Citizens associations; Religious organizations.
Social economy indicators	-1.9% of total employees in Romania -131.127 workplaces -Total contribution of social economy sector legal persons taxes and employer contributions: 4.18%	

Source: Social Economy Institute; National report on social economy sector in Ukraine

Many of the definitions given by Ukrainian specialists are similar (some taken from) with definitions from other geographical areas (France, Italy, USA). I have selected four definitions with a certain specificity to compare them with definitions given by Romanian specialists. For the Ukrainian exegetes, "the main difference between" social economy "and" political economy "is that the first is the science of" human cooperation "and the second is the science of" human confrontation".

Recently there have been published multiple manuals and monographs regarding the economic theory, there have been multiple editions and translations of the most renown, very successful authors in the world. None of these publications mentioned common aspects between "economy" as such (Economy) and "Social economy" – another science.

**Definitions given by Ukrainian authors:**

1. The social economy is a set of socio-economic relations between people who appear in the process of production, distribution, exchange and consumption of material goods and services in the world of limited resources. It creates a defined economic system (economy) that is consciously focused on personal development, economic growth and social progress, well-being and living standards in the country (Головнина, 2006).
2. Social economy - a system of social and economic relations based on diversity of property, freedom of entrepreneurship, healthy competition in the conditions of solid social policies, offering decent living standards and guaranteed social protection, based on a high level of development economic. The social economy advocates a management system that ensures socially-oriented growth in the context of social development oriented simultaneously to the economy (Віскова, Котвіцька, 2013).
3. The social economy studies the laws and rules of civil society, realizes a social consensus, seeks a social compromise in order to achieve well-being in a complex and controversial world (Беляев, Дибя, Кириленко, 2005).
4. Social economy is determined by general categories of economic theory: production, distribution, exchange and consumption. In conducting the analysis of personal and public interest, special attention is paid to the decisive sphere of human

activity - the production and distribution of vital goods in the emerging market economy (Бондаренко, 2016).

5. Social entrepreneurship aims at "comprehensive measures addressed to social groups or natural persons finding themselves in complicated situations and requiring external assistance" (Social Services Law, 2004)

#### ***Definitions given by Romanian authors***

1. "Social economy is the set of activities organized independently of the public sector, whose purpose is to serve the general interest, the interests of a community and / or personal non-patrimonial interests, by increasing the employment of the vulnerable group and / or the production and supply of goods, provision of services and / or execution of works" (Law No. 219/2015, art.2).

2. "In post-communist Central and Eastern Europe, social enterprises were stimulated by a strategical distortion of the state. Here, the strategical distortion of the state was more dramatical and it was not supported by the civil society, which was already weakened by the communist period. Moreover, the transition to a market economy brought high increases of unemployment. The international community responded to this crisis with an increased allotment of foreign help, as well as with various sets of political recommendations. A small but increasing number of Central and Eastern Europeans, social reformers, grouped into social enterprises as a reliable solution, and they received support from international sources for their development. Although it was regarded as an alternative service for unemployment and human services, the social enterprise concept in Central and Eastern Europe begins to reflect the realities that are already recorded in the region." (Nicolăescu, 2012, p.80)

3. "The social economy was born two centuries ago out of the people's desire to fight poverty and unforeseen events, to help each other in times of difficulty, to do something not only for them but also for the community without waiting for any reward in this regard and to place the money, not forgetting to be solidary. The social economy tries to effectively combine the freedom of the market, which operates on economic principles and social responsibility based on the principle of social solidarity for the benefit of society as a whole" (Vîrjan, 2012, p.119).

4. "Social economy can be regarded as a continuance of the occupation policy as it attempts to render workplaces to a population in distress. The social economy creates workplaces especially for disabled persons, socially excluded persons, persons without vocation, without a home and turned into homeless persons, and other persons interested in the values of social economy" (Vîrjan, 2012, p.124)

5. "In the opening report "Profit for people" the social economy effectively combines individual and collective responsibility for the production of goods and / or supply service, which pursues the economic and social development of a community and whose main purpose is social benefit. The social economy is based on a private, voluntary and solidarity initiative, with a high degree of autonomy and responsibility, involves economic risk and limited profit distribution" (Asiminei, 2012,p.10).

**Table 3.** Comparisons between definitions given to the social economy in Ukraine and Romania

<b>Defining elements</b>	<b>Romania</b>	<b>Ukraine</b>
The position of the social economy among the economic sectors	The social economy includes all the organizations located between the public sector and the private sector in terms of the organization, functioning and principles stated (Pîrvu, Ungureanu, Hagi, 2009, p.53)	Social enterprise as a symbiosis of traditional business and charity (Kostetska, Berezyak, 2014)
Autonomy of the scientific field	The social economy has a relative autonomy, operating in accordance with a special legislation	The social economy as a new field of research has emerged relatively recently at the junction of several sciences (psychology, labour economics, sociology and more).
The relationship between economic and social	The focus is primarily on social issues, without neglecting economic aspects	The focus is almost exclusively on social issues
Values assumed	Solidarity, Equity and Social Justice, Equal Opportunities, Respect for Human Rights and Freedoms, Democracy, Respect for Property, Decentralization, Free Market, Ecological Values (Rista, Stanciu, 2011)	Justice and social security, equality of all citizens before the law (Matveev, 2011)
The relationship between the social and the liberal economy	Complementarity	Differentiation: the social economy is predominantly collaborative, while the liberal economy is predominantly competitive
Model accepted	The French model, the social economy of solidarity	The German model the social market economy
Focalization	On the economic activities carried out	On the "management system that ensures socially oriented growth while socially oriented towards the economy" (Казань 2005)
Expected effects	Improving living conditions and providing new	First of all, the expected real effects should be evaluated

Defining elements	Romania	Ukraine
	opportunities for disadvantaged or vulnerable people (Law 219/2015)	on the basis of "not only economic but also social criteria". Secondly, the concept of "socialization" cannot and should not be limited to social security and social protection of the weak segments of the population but is able to take into account all aspects the economic activities of the state, which serve the social component (Заславська, 2004)

Source: Author's works

### Conclusions

Fighting poverty is an acute issue: the Ukrainian and Romanian borderline regions clearly suffer from lack of investments, high unemployment rate, presence of vulnerable inhabitants. Thus, it would be purposeful to form and implement common strategies regarding the resolution of existing issues, exchange of experience regarding the social adaptation issues of these groups, the employment of the same, supply of social services at a proper level.

In Romania, as well as in Ukraine, social entrepreneurship is a new method of economic activity, which combines a social mission with economic efficiency and innovations, which is characteristic to enterprises. Social entrepreneurship is a concept that fundamentally changes the main objective and mission of enterprises' activities, where all marketing activities' profit is directed to the resolution of social issues.

The idea of a social economy is relatively new in Ukraine, while in Romania, especially after the integration into the EU and benefiting from the possibility of attracting European funds for the development of this sector, the social economy is conceptualized and theorized in a series of studies, along with the development of social enterprises.

"Ukrainian legislation does not yet have a definition of the social enterprise and does not create the environment in which all the advantages of this phenomenon could be advantageously used" (Kovaliv, 2007, p.1), while in Romania there is a law of the social economy which, on the one part also clarifies the term from a legal point of view and, on the other hand, regulates its organization and functioning framework (Law 219/2005)

Despite these differences, there are many similarities in how to define the concept of social economy in Romania and Ukraine.

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## BOOSTING INCLUSIVE ENTREPRENEURSHIP AS A STRATEGIC OPTION OF LOCAL DEVELOPMENT IN ROMANIA IN 2014-2020 (II)

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**Abstract:** *The present paper is the second part of an analysis that aims to clearly identify and assess the needs of the inclusive entrepreneurship target groups in Romania for 2014-2020, in order to encourage entrepreneurship and self-employment as local development strategic option. The specific objectives of the analysis are: 1. to analyse the national context in terms of employment and entrepreneurship for the period 2014-2020; 2. to identify the groups at risk and uncertainty compared to employment and entrepreneurship, groups disadvantaged on labor market or under-represented in entrepreneurship; 3. to assess the specific needs of identified groups in four small towns in Romania and to verify if boosting inclusive entrepreneurship is a strategic option viable for local development. As second part of this research, the present paper analyses through comparison if boosting inclusive entrepreneurship is a viable strategic option of local development for 4 small towns in Romania: Slănic Moldova, Găești, Balș, Seini located in different development regions, respectively North-East, South, South-West Oltenia and North-West. The analysis of needs is based on national territorial statistics and local development strategies for 2014-2020.*

**Keywords:** *inclusive entrepreneurship; labour market; regional development; local development.*

**JEL classification:** L26; O18; O20; R11; J21; M21.

### 1. Theoretical and research background

The aim of this analysis is to clearly identify and assess the needs of the target groups of inclusive entrepreneurship in Romania for 2014-2020, in order to encourage entrepreneurship and self-employment as regional and local development strategic option.

The present analysis is derived from a larger study looking at inclusive entrepreneurship in Romania in the context of European Union. Our previous research on this topic addressed policy analysis for 2007-2013 (Dodescu and Pop-Cohut, 2015, 2016). We concluded that the need for inclusive entrepreneurship policy support definitively exists in Romania but the target groups are partially different compared to the EU general context, more disadvantaged groups are especially: youth, women and rural people (Dodescu and Pop-Cohut, 2016). Looking at existing policies and programmes in 2007-2013, we identified national programmes targeting only youth and women entrepreneurship, the strengths in 2007-2013 being related to EU structural and agricultural funds, particularly ESF - supported actions (Dodescu and Pop-Cohut, 2015).

The specific objectives of the present analysis are: 1. to analyze the national context in terms of employment and entrepreneurship for the period 2014-2020; 2. to identify

the groups at risk and uncertainty compared to employment and entrepreneurship, disadvantaged groups on labour market or under-represented in entrepreneurship; 3. to assess the specific needs of identified groups in four small towns in Romania and if boosting inclusive entrepreneurship is a strategic option viable for local development. The tools used for need analysis were the following: Eurostat and national statistics, EU strategic documents, national strategies, regional and local development strategies.

The present paper is the second part of this research and analyses through comparison if boosting inclusive entrepreneurship is a viable strategic option of local development for 4 small towns in Romania: Slănic Moldova, Găești, Balș, Seini located in different development regions, respectively North-East, South, South-West Oltenia and North-West. The data used is based on national territorial statistics and local development strategies for 2014-2020.

At local level the development and promotion of inclusive entrepreneurship depends on one hand on the structure and workforce training and on the other hand on the degree of diversification of the economy. In the four regions of development analysed, namely: North - East, South Muntenia, South West Oltenia and North-West, are present a large number of cities with low attractiveness due to their specialization in a narrow industry, which has direct repercussions on the entire regional economy. In this respect, the most effective policies do not aim to alter existing economic structure of cities, but support the capitalizing of existing competitive and comparative advantages.

The implementation of these policies can be achieved both by **supporting local entrepreneurship**, economic diversification and local production systems and through proper training of the labour market **through education and qualification of workers and thus by increasing employment**. Through such policies shall be reduced the risk of serious economic disruption as happened in mono-industrial areas, where economic growth was supported only by one field.

The local context is analysed from the perspective of the four towns selected: Slănic Moldova (North - East development region) Găești (South-Muntenia development region), Balș (South - West Oltenia development region) and Seini (North West development region), in terms of business environment, development of small - and medium sized enterprises development opportunities for new business development projects of businesses established in the local development strategy for the period 2014-2020, from the point of view of demographics and employment of the population.

## **2. Employment and inclusive entrepreneurship in Slănic Moldova town, Bacău county**

**Slănic Moldova** town lies in the south-western part of Bacău county. It is a balneary and climacteric resort of national interest, the most important in the North-East region of development in terms of curative properties and ambient. In light of demographic volume, Slănic Moldova City is the smallest urban centre in Bacău county, numbering only 4,933 inhabitants currently. The total area of the locality is 11,595 ha from which forests occupy 9,265 ha (MRLD, 2014).

In the city of Slănic Moldova are assigned on average 22.3 legal active companies per 1,000 inhabitants. The report afferent to the urban environment in the county is 33.8 companies per 1,000 inhabitants, so that the rate of entrepreneurship in Slănic

Moldova is 11.5% lower than the county average. In Slănic Moldova do not activate large establishments (employers of labour force) (MRLD, 2014).

*The number of employees*, according to statistics provided by the City Hall of Slanic Moldova, amounts to 1,717 people in 2016, most of them working in trade sector. According to the Strategy of city development of Slănic-Moldova in 2009 there were 618 employees, so it has recorded an increase by 177.83%.

The largest part of the employed population works in trade and tourism, followed by areas such as constructions, manufacturing, etc.

*The representative companies* for the city's industry are operating in the following areas: trade, tourism, manufacturing and other services. The main sectors of the local economy based on the turnover registered are: trade (58.1% of companies operating in this sector); hotels and restaurants (18.5%); manufacturing (13.4%); other economic sectors (10%).

***The opportunities to develop new businesses in the city Slănic Moldova, according to The Strategy of Local Development of Slănic Moldova for the period 2010-2020, Bacău County (Slănic Moldova Town Hall, 2010, The strategy of local development of Slănic Moldova for the period 2010-2020), are among others:***

- the collection and capitalization of berries and mushrooms collected from the forest area of the Slănic Moldova city;
- collaboration between business and educational institutions in order to form the workforce on the fields required on the market;
- promoting local business opportunities among Romanian and foreign potential investors;
- development of communication between business representatives and the local authorities;
- European funds and government programs supporting the development of entrepreneurship;

***Among the major objectives of development for the city of Slănic Moldova, which could cause the development of inclusive entrepreneurship we mention (Slănic Moldova Town Hall, 2010, The strategy of local development of Slanic Moldova for the period 2010-2020):***

- The reduction of seasonality of tourism activities: Developing tourism in winter months; The diversification of tourism activities in resort; Increasing the quality of tourism;
- the development of economic activities and reducing development gaps between component localities of the city.

The milestones of the population demographics of the city Slănic Moldova are elements of major interest to define strategic objectives and action plans for both medium and long term economic development in general and for the development of inclusive entrepreneurship in particular.

*The population* of the town of Slanic Moldova represents 0.68% of the Bacau County. By ethnicity, inhabitants of Slănic Moldova are in proportion of 96.02% Romanian and 0.19% of the population is Hungarian (NIS, 2011).

The religious structure reveals a particular situation, the majority of the population, 59.55% is Roman Catholic, while only 36.32% of the population of Slănic Moldova are Orthodox (NIS, 2011).

The highest share has the population aged 40-44 years (9.03%) of which 44.06% women and 55.93% men. In the town of Slanic Moldova during 1990-2010, *the share*

of young people in total population of the city Slănic Moldova was reduced. Age groups aged 0-14 held 26.9% of the total population in 1990, and in 2010 only 17.1% (down nearly 10 percentage points). The share of the population aged 15-29 decreased from 25.6% (1990) to 22.9% (2009). The largest increase is the proportion of the population over 60 years, from 10.4% in 1990 to 17.7% in 2010. These changes, namely the drop in the young population and the increase in the elderly population, led to the increase in the aging population, described by a spectacular evolution of the demographic aging index from 38.7% in 1990 to 103.7% in 2010 (NIS, 2011).

Analysing the structure of the stable population in Slănic Moldova according to the level of education (NIS, 2011), we observe that the highest share of the population has secondary education (28.40%), followed by those with high school education (22.99%) and those with vocational and technical education (20.59%). The three categories account for 71.98% of the total population. Among those with only secondary, elementary, graduate or illiterate education, women have the highest share.

Of the total active population of Slănic Moldova, the employed population represents 91.13% (1717 out of a total of 1884 active persons), out of which 63.48% are women and 36.52% are men (Slănic Moldova Town Hall, 2016).

According to the data provided by Slănic Moldova City Hall, the employed population of Slănic Moldova, compared to the total population, represents 40.90%.

*The main categories of potential entrepreneurs identified in Slănic Moldova are the following* (Slănic Moldova Town Hall, 2016):

- *unemployed*: 80 persons (1.91% of the total population) of which, 56.25% men and 43.75% women;
- *inactive people*: 2481 people (59.10% of the total population), of which 55.99% are men and 44.01% are women;
- *women*: 2106 people (50.17% of the total population);
- *young people*: 1832 people (43.64% of the total population), of which 54.20% are men and 49.07% are women;
- *elderly*: 639 persons (15.22% of the total population) of which, 42.10% men and 57.90% women;

### **3. Employment and inclusive entrepreneurship in Găești city, Dâmbovița county**

The city of Găești is situated geographically in the far South West of Dâmbovița county. According to the final data of the Census of Population and Housing (CPH) in 2011, the city of Găești had 13,317 inhabitants, of which 46,9% were male (6,250 persons).

Găești has predominantly an industrial and agricultural function, but it also has other functions such as: transport, commercial, educational, cultural-scientific, residential, sanitary and, last but not least, tourism function.

Currently, according to statistical data, out of a total of 375 economic agents operating across the city, 1 is a large enterprise in manufacturing (S.C. Arctic, S.A) and 374 are SMEs. Arctic SA provides more than half of the available jobs on the local market (57.62% of employees of Găești City - own processing based on the information provided by the Dâmbovița County Statistics Department - and [www.listafirme.ro](http://www.listafirme.ro) (2015)).

*The number of employees*, according to the partial statistical data resulting from CPH 2011, stood on 1 July 2011 at 5106 persons, most of them working in industry, respectively 3057 and especially in the manufacturing branch (2855 persons). Structural, the population is occupied in the following areas: Industry 59.87%; Trade 9.55%; Education and Health and Social Assistance 16.20%; Services (transport, hotels, telecommunications, construction, etc.) 12.68%; Public administration and defence, social security in the public system 2,70%.

*Representative companies in the city's industry* is active in the fields of: Manufacturing, Trade, Mining, Production and Supply of Electricity and Heat, Gas, Hot Water and Air Conditioning.

The opportunities for local economic development of Găești city for the 2014-2020 period, which can lead to the growth and development of entrepreneurship, are the following (Găești Town Hall, 2014):

- Development of the local business environment and tourism by accessing programs with non-reimbursable financing;
- Increasing the number of investors as a result of the promotion of new industrial parks and business infrastructure;
- Construction of exhibition and logistic centres for the promotion of local economic agents' offers;
- Development of transport and technical-urban infrastructure as a support for tourism development.

The Strategic Objective 2020 - *development of Găești as an urban growth pole in the South Muntenia Region is the reduction and elimination of territorial disparities between Găești and European cities*. In this respect, regarding the business environment, were proposed as projects:

- Developing business infrastructure by cultivating entrepreneurship and promoting public-private partnerships;
- Encouraging economic activities that ensure the optimal use of local human and material resources.

Găești's development vision for the 2014-2020 period is centred on developing the business environment through knowledge, innovation and technological breakthrough, closely linked to raising the standard of living. In *The local development strategy of Găești, Dâmbovița County, for the period 2014-2020, regarding the development of the business environment*, the following objectives were established (Găești Town Hall, 2014):

- strengthening the existing business environment in the context in which the main investor in Găești is Arctic SA (57.62% of the total employees of Găești).
- diversifying the business environment, developing new business infrastructure, attracting investors and developing investor support services.

The demographic landmarks of the Găești population are key elements for defining strategic objectives and medium and long-term action plans both in terms of local development and the development of inclusive entrepreneurship.

The population of Găești represents 2.91% of the population of Dâmbovița county and 7.78% of the population of Dâmbovița county residing in the urban area. *The population density* in Găești is 727 inhabitants / km<sup>2</sup>.

*According to ethnicity*, the inhabitants of Găești are over 95% Romanian and only 5% represent the Roma population (1.71%) and very small Turkish, Hungarian and Bulgarian weight.

*The religious structure* reveals an overwhelming majority of Orthodox believers in the weight of 98.56%, the remainder being Pentecostal, Seventh-day Adventist, Roman Catholic and Reformed Confession, with other religions present as well.

The vast majority of the population is aged between 20 and 59 years (58.71%) of which 51.86% are women and 48.14% are men.

Analysing the structure of the stable population in Găești according to the level of education (NIS, 2011) we observe that the highest share of the population 55.37% have university, post-secondary and master studies and high school education. In the three categories of population mentioned women have the largest share. Also, among the people who have only secondary, elementary, graduate or illiterate education, women are the largest share too.

The occupied population of Găești, compared to the total population, represents 38.34% and the inactive persons 61.65%. Of the total active population of Găești, the employed population represents 91.07%, of which 46.95% are women and 53.05% are men.

*As a result of our analysis, we consider that the main categories of potential entrepreneurs in Găești can be identified among the following:*

- *unemployed:* 206 people (1.54% of the total population) of which 43.20% men and 56.80% women;
- *inactive people:* 8211 people (61.65% of the total population), of which 46.88% are men and 53.11% are women;
- *women:* 7067 people (53.07% of the total population);
- *youth:* 1869 people (14.03% of the total population), of which 46.97% are men and 53.02% are women;
- *elderly:* 1922 persons (14.43% of the total population) of which, 46.98% men and 53.01% women;

#### **4. Employment and inclusive entrepreneurship in Balș city, Olt county**

Balș is a town in the Olt county, the South West Oltenia development region, Romania. According to the final data of the CPH in 2011, the city of Balș had 18,164 inhabitants and 4.2% of the Olt county population, out of which 8776 inhabitants were male (48.3%) and 9,388 were women (51.7%).

The town of Balș has predominantly a commercial, industrial and agricultural function, but it also has the function of transportation, education, cultural-scientific, residential, sanitary and, last but not least, tourism.

The occupied population of Balș in the total population represents 35.31% and the inactive persons 58.93%.

Of the total of 442 businesses operating in Balș, 344 are micro-enterprises, 28 small businesses, 3 medium-sized enterprises and a large enterprise. Therefore, the share of the SME sector at the level of the city is 99.73%, above the county and regional average, given that there is only a company with more than 250 employees in the city. The rate of entrepreneurship (the number of enterprises per 1000 inhabitants) in the city of Balș is 26.24%, above the county average (17.14%).

*The number of employees, according to the statistical data available in the Balș Development Strategy 2014-2020* (Balș Town Hall, 2014), in 2012, it amounted to 5231 people, most of whom worked in industry, respectively 2542 people. According to the same source, the average number of employees in the city decreased by 1.5% (in 2008), 25.7% (in 2009), 30.6% (in 2010), 27.8% (in 2011) and 8% (in 2012) compared to 2007. Structurally, the population is occupied in the following areas:



Industry 48.59%; Trade 11,12%; Education, Health and Social Assistance 13.68%; Services (Transport, Hotels, Telecommunications, Construction, etc.) 20.35%; Public administration and defence, social security in the public system 1.56%.

**Representative companies in the city industry** are active in the fields of metallurgy (21.62% of companies), textile (18.92%), chemical (18.92%), food (16.22%) and woodworking and furniture manufacturing (8.11%), machine building (10.81%), trade, construction, etc.

*The opportunities for developing new businesses in Bals*, according to the local development strategy of Bals, Olt County, for the period 2014-2020, are:

- Increasing the attractiveness of the business environment by developing business support structures;
- Developing the associative spirit, especially in agriculture;
- Availability of European funds for the development of urban poles, increasing economic competitiveness, research-development-innovation, development of transport infrastructure and public services, etc.

The business development projects set out in the local development strategy of Bals focus on the following priorities (Balş Town Hall, 2014):

- Increasing accessibility and supporting mobility in the city of Bals;
- Supporting the economic development and intelligent economic specialization of Bals;
- Development of the technical-urban infrastructure;
- Ensuring that all citizens have access to quality public services.

Demographic landmarks of the Balş population are key elements for defining strategic objectives and medium to long-term action plans both in terms of local development and development of inclusive entrepreneurship.

The population of Balş municipality represents 4.2% of the population of Olt county and 10.64% of the population of Olt county with urban residence. After ethnicity, the inhabitants of Balş are over 88.1% of Romanians and 3.4% represent The Roma population and the other ethnic groups together have only 10 people (of which 4 Hungarians), respectively, less than 0.1% of the total population.

*Religious structure* reveals an overwhelming majority of Orthodox believers, with 90.6%, the remainder being Seventh-day Adventists 0.2%, Jehovah's Witnesses 0.2%, Baptists 0.2%, Pentecostals 0.1%.

From the analysis of the structure of the stable population in Balş according to the level of education we can see that the highest share of the population 55.28% have university, post-secondary and masters' studies and high school education (NIS, 2011). It can also be noticed that in the three categories of population, women are the largest share. However, among those with only secondary, elementary, school-leaving or illiterate education, women have the highest share in all these categories. Of the total active population of Bals, the employed population is 85.93%, of which women are 62.90% and 37.09% are men. In the Balş town, the adult population represents 68.1%, a very high value, which indicates the presence of a significant work force, and the percentage is increasing, well above the county level (59.9%), the regional (60.9%) or national (61.8%), the elderly population (60 years and over) exceeded the young population numerically, reaching 16.3%, a value however much lower than that of Olt County (25.2%), the South-West Region (24.1%) and Romania (22.3%).

*As a result of our analysis, we consider that the main categories of potential entrepreneurs in Balş can be identified among the following:* (Balş Town Hall, 2016):

- *unemployed*: 655 persons (3.60% of the total population) of which, 50.07% men and 49.93% women;
- *inactive people*: 10,704 people (58.93% of the total population), of which 39.23% are men and 60.77% are women;
- *women*: 9,388 people (51.68% of the total population);
- *young people*: 6,114 persons (33.66% of the total population), of which 49.34% are men and 50.66% are women;
- *elderly*: 1,948 people (10.72% of the total population) of which 44.55% are men and 45.45% are women.

## 5. Employment and inclusive entrepreneurship in Seini town, Maramureş county

The town of Seini is situated in the western extremity of Maramureş County, developing at an altitude of 140 m in the Someş Plain on its contact line with the extensions of the Gutâi Mountains. The small distance between Seini and the Baia Mare county residence (27.3 km using E576) strongly influences the Seini population, manifesting an important migration phenomenon to Baia Mare both for economic purposes (labour migration, trade relations / trade) And for socio-educational purposes (high schools, faculties, hospitals). According to the final LPL data of 2011, Seini had 8987 inhabitants. (Seini Town Hall, The local strategy for sustainable development of Seini town, 2014-2020).

**The business environment is represented by a total of 185 active companies, of which 92% are micro-enterprises, respectively have a maximum number of 9 employees and an annual turnover and / or total annual assets of maximum EUR 2 million (Seini Town Hall, The local strategy for sustainable development of Seini town, 2014-2020). Active trading companies operate in the following areas: wholesale and retail; repair of motor vehicles and motorcycles (45), manufacturing (29), transportation and storage (27), administrative and support service activities (27), construction (26), agriculture, forestry and fishing (17); restaurants (14).**

The main branches of the local economy according to the number of active companies are: wholesale and retail; repair of motor vehicles and motorcycles (24% of companies operating in this sector); manufacturing (16%); transport and storage (15%); administrative service activities and support service activities (15%); constructions (13%) ([www.topfirme.com](http://www.topfirme.com)).

**The opportunities for developing new businesses, in line with the local sustainable development strategy of Seini town for the period 2014-2020, are:**

- the possibility of registering and promoting a local brand for traditional products;
- creation of small units for processing of agricultural products: meat, dairy, etc.;
- accessing European and government funds for: setting up a centre for collecting vegetables and fruit; Setting up a business incubator to boost entrepreneurship and job creation (Seini Town Hall, The local strategy for sustainable development of Seini town, 2014-2020).

**The business development projects set out in the local strategy for sustainable development of Seini town for the period 2014-2020, which can determine the development of inclusive entrepreneurship, are, among others,**

***the following (Seini Town Hall, The local strategy for sustainable development of Seini town, 2014-2020):***

- Making an investment in the collection and processing of agricultural products (fruits, berries, vegetables, cereals, milk)
- Developing a program to stimulate entrepreneurship in agriculture and continuous training in the field
- Supporting and promoting local apple varieties;
- Running a communication and awareness program for your own values and tourist attractions
- Revitalizing the tradition of wine production at Seini and introducing wine cellars into the tourist circuit;
- Establishment of a counselling / support and support centre for the population to support local initiatives by providing assistance in creating and developing businesses and in accessing grants.

Demographic milestones of Seini's evolution are key elements for defining strategic objectives and medium and long-term action plans.

The population of Seini represents 1.87% of the Maramureş County population and 3.26% of the population of Maramureş County living in the urban area.

According to ethnicity, Seini inhabitants are over 78% Romanian, 22% are Roma or other ethnic groups (Hungarians, Germans, Ukrainians, Jews, Ruthenians).

The highest share has the population aged 40-44 years (9.64%) of which 48.32% are women. International migration of working-age population and increasing aging population are two trends that have been recorded at Seini's level in the last decade with major negative long-term impacts.

From the analysis of the stable population structure in Seini according to the level of education (NIS, 2011): it shows that the largest share of the population - 30.56% have high school education, followed by those with secondary education (28.54%) and those with vocational and technical education (15.90%). The three categories account for 75% of the total population. Among those with secondary, elementary, graduate or illiterate education, women have the largest share.

Of the *total active population* of Seini, the employed population is 88.99%, of which women - 38.76%. *The number of employees*, according to the statistical data provided by Seini City Hall, amounts to 3,115 people in 2016.

*Following our analysis, we believe that the main categories of potential entrepreneurs in the city of Seini can be identified among* (Seini Town Hall, 2016):

- *unemployed*: 407 people (4.52% of the total population) of which, 56.01% men and 43.99% women;
- *inactive people*: 174 people, of which 59.19% are men and 40.81% are women;
- *women*: 9,388 people (51.68% of the total population);
- *young people*: 2364 people (26.30% of the total population), of which 50.38% men and 49.62% women;
- *elderly*: 1493 people (16.61% of the total population), of which 38.98% were men and 61.02% were women.

## 6. Conclusions

Analysis of the local context on inclusive entrepreneurship, conducted in four small urban settlements, namely: Slănic Moldova (North–East development region), Găești (South-Muntenia development region), Balș (South-West Oltenia development region) and Seini (North-West development region), in terms of business environment, development of the SMEs sector and development opportunities for new business, development projects of businesses established in local development strategies for 2014-2020 and in terms of demographic and occupational aspects of population indicates that there is a untapped entrepreneurial potential at the level of small towns.

For each of these localities, has been identified the concern in developing and supporting entrepreneurship both at the level of the local public administrations (through development measures and projects outlined in local development strategies) as well as regarding the human potential (by identifying disadvantaged target groups in terms of access to and participation in the labor market, but which could initiate a business).

We conclude that it is necessary to apply some measures for the formation of entrepreneurial culture, to improve the level of training and development in the field of business, to create the necessary competences for the understanding, realization and implementation of a business plan - materialized in the initiation of a new business. It is necessary to improve the entrepreneurial skills of individuals (e.g. the unemployed, inactive people, people who have a job and set up a business to create new jobs) that intend to start a business in the urban area.

Access to finance is the most important obstacle for potential entrepreneurs, the implementation of projects in the field of entrepreneurship support, which besides the training of entrepreneurial skills, the realization of a business plan, supposes also forms of financing the new business - *minimis aid* financing for start-ups based on a business plan.

These measures should be complemented by the integration of advice and support measures, such as business incubators (we did not identify the existence of any business incubator in any of the cities analysed) which provide support and minimal facilities for start-ups, namely customized counselling / consulting / mentoring and monitoring services.

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# RURAL EMPLOYMENT SCHEME IN INDIA – REVIEW OF THE SCHEME MAHATMA GANDHI NATIONAL RURAL EMPLOYMENT GUARANTEE ACT (MGNREGA)

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**Abstract:** Unemployment is one of the major problems faced all over the world. According to International Labour Organisation (ILO) “unemployment covers people who are: out of work, want a job, have actively sought work in the previous four weeks and are available to start work within the next fortnight; or out of work and have accepted a job that they are waiting to start in the next fortnight”. India since early independence always had focus on the rural areas and unemployment abolishment. This article is made in a effort to summerise the scenario of rural unemployment in India and the measures taken by the government to abolish the rural unemployment. Dev (2009) mentioned that “public works programmes have been a central component of the safety net approach in India since the 1960s, with the aim of improving the livelihood security of rural households by creating employment and developing rural infrastructure and assets” (Dev, 2009). Ministry of Rural Development in its report (2008) mentioned that “Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) was passed in the Indian Constitution in September 2005, and has three overarching goals: 1) employment creation; 2) regeneration of the natural resource base and creation of productive assets in rural areas; and 3) strengthening of grassroots processes of democracy through transparent and accountable governance” (MoRD, 2008). Planning Commission (2008) conducted a survey in 20 states to study the impact of MGNREGA and the results showed that “there is a huge change of low income groups (about 50%) hiking towards high income groups, significant increase in the expenditure on food and non-food items (6%) & change in the expenditure pattern, procurement of livestock (68%) & household articles (42%). Initiation of savings for the first time (2%), clearing of outstanding loans (1/5th of sample households) were some of the positive impacts of MGNREGA on rural households. The other things observed were the non-provision of employment within stipulated timeframe (80%) and non-payment of unemployment allowances, utilization of small portion of households for more than 35 days of work and existence of distress migration” and so on. This article is aimed to elaborately explain a rural employment scheme of India named MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act), it's implimentation and implications.

**Keywords:** Rural India; Unemployment; Employment; NREGA.

**JEL Classifications:** R51; J21; E24.

## 1. Introduction:

National Rural Employment Guarantee Scheme (NREGA) which later was renamed as Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA), aims to guarantee work to the needed people. The goal of the scheme is to enhance the social, economical status of rural people by providing 100 days of wage employment in a financial year to every household whose adult is willing to do unskilled manual work.

MGNREGA which has got its name since October 2009 was previously known as NREGA. NREGA was first started in the year 2006 targeting only 200 districts which gradually owing to its great success has spread all across the nation. In the year 2008 the programme was already running successfully across the country. According to Ministry of Rural Development (2005), the programme was "the the largest and most ambitious social security and public works programme in the world". In its World Development Report 2014, the World Bank termed it a "stellar example of rural development".

Government of India in the year 2004 when UPA was the ruling party had pledged to provide a national employment guarantee act that could provide gainful employment to any adult individual of a family for a legal 100 days of labour on asset creating public works at a minimum wage. owing to the oath the government in the very next year introduced an act named - Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). This act was introduced with an aim of improving the purchasing power of the rural people, primarily semi or un-skilled work to people living below poverty line in rural India. It tries to fill the gap between the rich and poor in the country. Roughly one-third of the stipulated work force must be women.

## 2. Background Study:

According to WORLD BANK REPORTS (2007), the poverty in India has been coming down, from 64% in 1967 to 50% in 1977 and in 1986 it was 36% which was an appreciable achievement to a newly born country then. Though the percentages showcase the sharp decline the actual number of people in 1993-94 was 320 million which has fallen to 302 million in 2003-04 (PCI, 2008). Various factors influenced in this difference, one major factor being the population growth.

Ever since Independence India has been working towards upliftment of the rural people and the poverty in rural areas. MGNREGA being a successful programme, there were many other programmes taken up by the Government of India, State Governments and a few in collaboration of Central and State Governments but were not as successful as MGNREGA. Few programmes for rural upliftment which were initiated before MGNREGA were;

### 2.1 National Rural Employment Programme (NREP) :

Launched in October, 1980, NREP was a regular programme from the starting of the next financial year – April, 1981. This programme was launched with an aim of enhancing the nutrition status and living standards of the poor by providing them an additional gainful employment in the rural areas. The goal was to provide ~400 million mandays per year.

Source: <http://www.teindia.nic.in/>

- 2.1. Rural Landless Employment Guarantee Programme (RLEGP)  
In the year 1983, on the day of Independence (15<sup>th</sup> August) Rural Landless Employment Guarantee Programme (RLEGP) was introduced. The objectives of this programme were  
(a) Improving and expanding employment opportunities for the rural landless with a view to providing guarantee of employment to at least one member of every landless household up to 100 days in a year.  
(b) Creating durable assets for strengthening the infrastructure so as to meet the growing requirements of the rural economy.  
*Source: 9th Five Year Plan (Vol 2) : Poverty Alleviation Programme".*
- 2.2. Jawahar Rojgar Yojana (JRY)  
Jawahar Rojgar Yojana (JRY) is an amalgam of two initiatives of the Indian Government – National Rural Employment Programme (NREP) and Rural landless Employment Guarantee Programme (RLEGP). JRY is initiated on the first of the financial year 1989 (1<sup>st</sup> April, 1989). The programme mainly targetted the people below poverty line and the initiative is aiming to make sure that all the BPL people in the rural areas get 90 to 100 days of employment.  
*Source: General Knowledge Today (2017): Jawahar Rojgar Yojana, [http://www.gktoday.in/jawahar-rozgar-yojana\\_22/](http://www.gktoday.in/jawahar-rozgar-yojana_22/), Downloaded 10<sup>th</sup> April, 2017.*
- 2.3. Employment Assurance Scheme (EAS)  
Employment Assurance Scheme (EAS) was introduced on 2<sup>nd</sup> October 1993 with an intention of supporting nearly 1800 blocks which were identified as the backward blocks of different states. These blocks included the drought disposed, deserts, hills and tribal areas.
- 2.4. Jawahar Gram Samridhi Yojana (JGSY)  
Jawahar Gram Samridhi Yojana (JGSY) is the more efficient version of the earlier discussed Jawahar Rojgar Yojana (JRY). This initiative was made on the 1<sup>st</sup> of April 1999 with an aim to further improve the quality of life of rural people. *Source: Your Article Library (2017): Jawahar Gram Samridhi Yojana, <http://www.yourarticlelibrary.com/essay/jawahar-gram-samridhi-yojana-by-government-of-india/35005/>, Downloaded 10<sup>th</sup> April, 2017.*
- 2.5. Sampoorna Grameen Rojgar Yojana (SGRY)  
Sampoorna Grameen Rojgar Yojana (SGRY) was introduced in the year 2001 on 21<sup>st</sup> of September with an aim of providing employment and food security to people in the rural areas who live below poverty line.
- 2.6. National Food For Work Programme (NFFWP)  
Launched on 14<sup>th</sup> November 2004, National Food For Work Programme (NFFWP) basically aimed 150 backward districts in the nation. A total of nearly 30.6 Billion U.S. Dollars were allocated towards this project.
- 2.7. Integrated Rural Development Programme (IRDP)  
Integrated Rural Development Programme (IRDP) is a self employment programme targetted to rise the income and living standards of the poor people. This programme was launched in the year 1978 and was spread all over the country by 1980.

### 3. Features of MGNREGA:

MGNREGA was mainly aimed to provide employment to all those people who wish to work and this programme promises 100 days of work to the workers.



The main features of MGNREGA according to *MGNREGA operational guidelines 2013 – 4<sup>th</sup> edition*, are listed:

- *Guaranteed Employment* – Any adult member of a rural household applying for work under the Act is entitled to employment. Every rural household is entitled to not more than 100 days of employment.
- *Guaranteed Wages* – Wages are to be paid on a weekly basis and not beyond a fortnight. Wages are to be paid on the basis of:
  1. Centre- notified, state- specific MGNREGA wage list
  2. Time rates and Piece rates as per state- specific Schedule of Rates (SoRs)
  3. In any case, the wage cannot be at a rate less than Rs. 100 per day.
- *Unemployment Allowance* – If work is not provided within 15 days of applying, the state is expected to pay an unemployment allowance which is one- fourth of the wage rate.
- *Provision of Work* – Work is to be provided within a 5km radius of the applicant's village, else compensation of 10 per cent extra wage is to be provided to meet expenses of travel.
- *Gender Equity* – Men and women are entitled to equal payment of wages. One- third of the beneficiaries are supposed to be women. Worksite facilities like creches are to be provided at all worksites.
- *Financial Inclusion* – Since 2008, all wage payments have had to be transferred to bank or post office accounts of beneficiaries.
- *Social Security Measures* – In 2008, a provision was created which made it possible to cover beneficiaries under either the Janashree Bima Yojana (JBY) or the Rashtriya Swasthya Bima Yojana (RSBY).
- *Transparency and Accountability* – All MGNREGA- related accounts and records documents have to be available for public scrutiny. Contractors and use of machinery is prohibited.
- *Rights- based, demand- driven approach* – Estimation and planning of work is conducted on the basis of the demand for work. Hence, beneficiaries of the scheme are enabled to decide the point in time at which they want to work.

*Source : MGNREGA operational guidelines 2013 – 4<sup>th</sup> edition.*

#### **4. Financing:**

Mahatma Gandhi Rural Employment Gaurantee Scheme (MGNREGA) gets its entire financial support from the Government of India. Ever since the introduction of this programme the budget allocation for the programme is been increasing every year which also implies that the programme is a success year by year. In the very first financial year (2006/07) of the implimentation of MGNREGA the Government of India has spent \$ 1.7 billion which has increased more than 5 folds in financial year 2009-10 to \$ 6 billion (Dev, 2009)

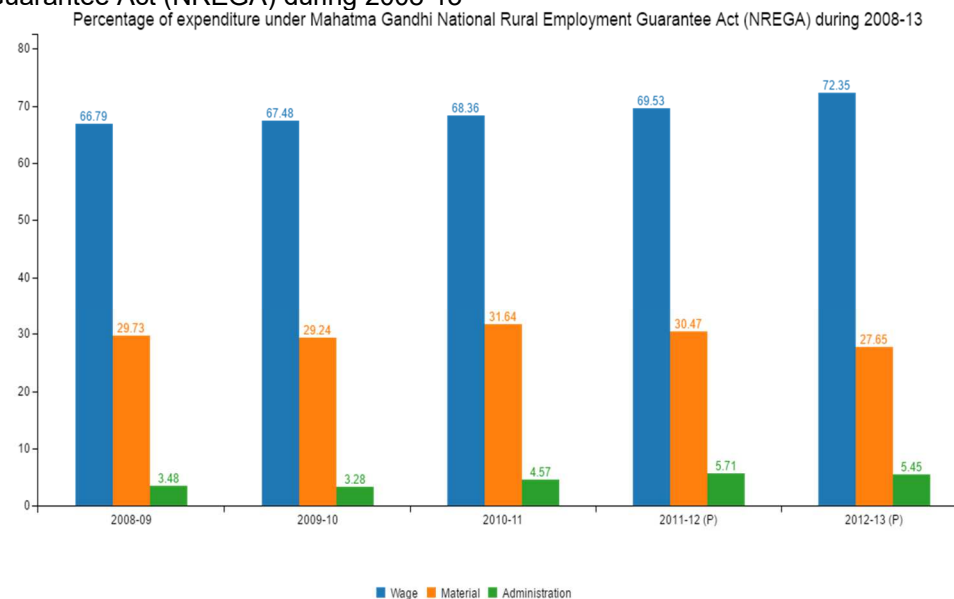
The budget from government is divided into three expenditures – the wages, the material and the administration. Usually the expenditure is highest on the wages then comes the material costs and the last expenditure is on the administration (Table 1).

**Table 1:** The expenditure made by the government of India from 2008 to 2013.

Year	Total Expenditure (in lakhs)	Expenditure on Wages	Expenditure on Material	Expenditure on Administration
2008-09	₹2725009.92	₹1820003.13	₹810089.26	₹94917.51
2009-10	₹3790522.78	₹2557932.28	₹1108448.71	₹124141.72
2010-11	₹3937727.05	₹2568652.93	₹1189108.96	₹179965.15
2011-12	₹3707282.22	₹2430622.40	₹1065047.60	₹211612.15
2012-13	₹3926767.98	₹2686191.46	₹1026565.73	₹214010.78

Source: [http://www.developmentprogress.org/sites/developmentprogress.org/files/in dia\\_report\\_-\\_master\\_0.pdf](http://www.developmentprogress.org/sites/developmentprogress.org/files/in dia_report_-_master_0.pdf)

**Figure 1:** Percentage of expenditure under Mahatma Gandhi Rural Employment Guarantee Act (NREGA) during 2008-13

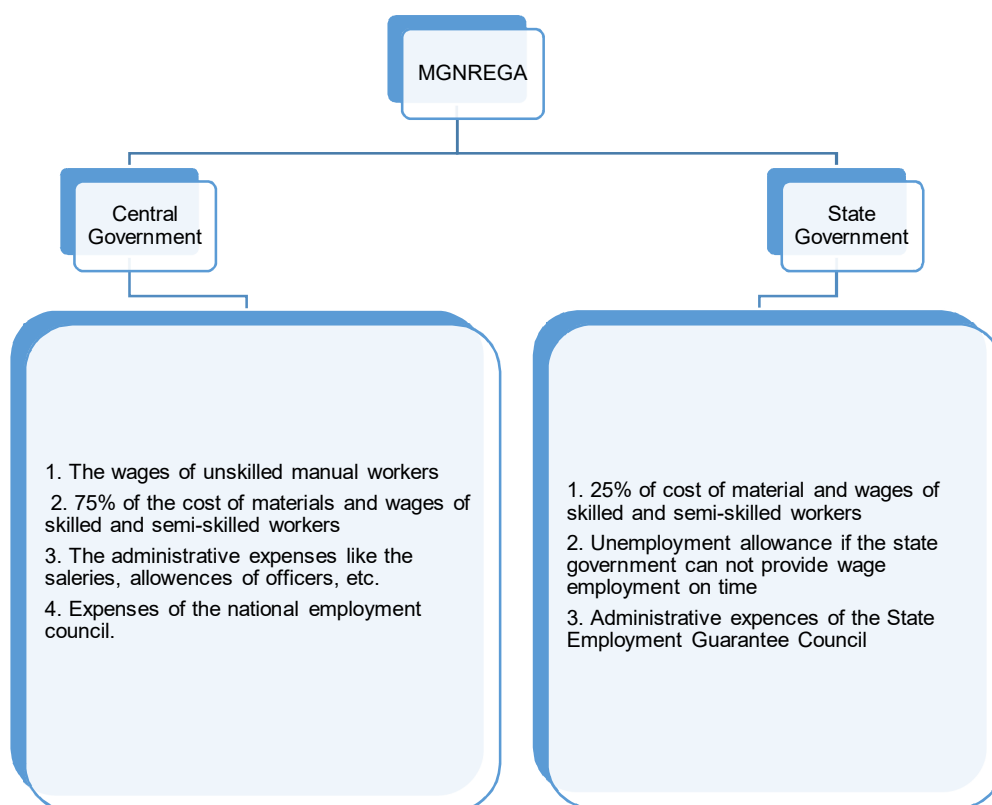


Source: <https://data.gov.in/visualize3/?inst=ed1562f26aaf11f182eabbb285b7ab12&vid=783#>

From the derived graph it is very clear that the government is giving the highest importance to the wages of the workers and the administration expenditure is pushed to the least of the whole expenditure but gradually the administration costs are increasing.

The central government of India bears three quarters of the whole costs incurred in the implementation and maintenance of MGNREGA, however, a quarter part is borne by the state government accordingly.

**Chart 1:** The chart below depicts the costs beared by state and central governments.



#### 5. Time line of MGNREGA:

- August 2005:** Inception of NREGA.
- February 2006:** NREGA implementation starts in 200 most backward districts.
- April 2007:** After the success of the programme in the first implemented 200 districts Government decides to add more 130 districts.
- April 2008:** The initiative is a huge success and implementation started in the whole nation.
- October 2008:** Government decided to transfer the wages directly to the bank accounts or post office accounts of workers to make sure that the money of workers reaches them properly
- October 2009:** Name of the scheme changed to MGNREGA.

Over the past 10 years of the implementation of MGNREGA many highets have been achived by providing every year on an average 5 crore households work under this

scheme, also there is a huge employment opportunity given to the backward classes and women.

#### **6. Permissible works under MGNREGA Scheme:**

*According to MGNREGA operational guidelines 2013 – 4<sup>th</sup> edition*, “MGNREGA aims at providing 100 days of wage employment in a financial year to every household whose adult is willing to do unskilled manual work. While the rural labours are ready to do any sort of work pertaining to their financial status, the government has a list of works which are permitted to be done by them, they are:

- Irrigation canals.
- Provision of irrigation facility, dug out farm pond, horticulture, plantation, farm bunding and land development on land owned by households.
- Renovation of traditional water bodies.
- Land development.
- Drought proofing including afforestation and tree plantation.
- Flood control and protection works including drainage in water logged areas including deepening and repairing of flood channels, chaur renovation, construction of storm water drains for coastal protection.
- Agriculture related works.
- Water conservation and water harvesting including contour trenches, contour bunds, gabion structures, etc.
- Livestock related works, like poultry shelter, goat shelter, construction of pucca floor, urine tank and fodder trough for cattleshed, azolla as cattle-feed supplement.
- Fisheries related works, such as, fisheries in seasonal water bodies on public land.
- Works in coastal areas, like fish drying yards, belt vegetation.
- Rural drinking water related works, like soak pits, recharge pits.
- Rural connectivity wherever necessary.
- Construction of Bharat Nirman Rajiv Gandhi Sewa Kendra as Knowledge Resource Centre at the Block level and as Gram Panchayat Bhawan at the Gram Panchayat level.
- Rural sanitation related works, like individual household latrines, school toilet units, anganwadi toilets, solid and liquid waste management.
- Construction of anganwadis.
- Construction of playfields.
- Any other work which may be notified by the Central Government in consultation with the State Government.”

Source: *MGNREGA operational guidelines 2013 – 4<sup>th</sup> edition*

#### **7. Challenges faced by MGNREGA:**

Being the biggest of its kind in the world the MGNREGA is doing extremely well. But as the other side of the coin this huge project is having its own drawbacks. Driving such a huge project is a biggest challenge to any government. Though the central government and the state governments are working very hard towards reducing the gaps in the implementation of the project a few listed below are the problems which are to be addressed at the earliest.

- Un-realistic and improper planning at the GP level.

- Delays in the wage payments
- fund constraints
- quality, durability, and usefulness of assets
- low awareness of the programme and less public participation
- lack of outcome based monitoring
- poor maintenance of records
- inadequate coverage of person with disabilities
- non compliance with transparency and accountability
- lack of ICT infrastructure
- inadequate capacity of functionaries
- lack of adequate number of technical staff

Source: MGNREGA operational guidelines 2013 – 4<sup>th</sup> edition

### Conclusion:

Reducing poverty in India is a huge challenge, but the government has taken up this extreme challenge in the year 2005 and is doing extremely well in reaching its set goals. Since last five financial years the Government of India has released a total of nearly 26 billion USD for MGNREGA which shows how big the project is. The government of India has a record of providing nearly 125 million job cards and has 254 million employees.

Though the scheme is a huge success, a few recommendations I would like to suggest for the further goodness of MGNREGA are:

1. According to me there should be more provision for the semi and skilled workers and a different payments/remunerations for these people which may further make this programme more success.
2. the awareness among the rural people about such beneficiary programme should be increased. Only 1/6<sup>th</sup> part of the whole rural population are technically being benefitted by this programme
3. Limiting the political interference in the programme only upto necessity.
4. The number of employment days if increased, it would benefit the regular beneficiaries. Though the Government of India is taking quick steps to increase the number of working days from 100 to 150 in the drought-affected areas (<http://indianexpress.com/article/business/economy/centre-increases-number-of-work-days-under-mgnrega/>), if this increase will be done in all across country it would be more beneficiary.

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## THE CREATIVE ECONOMY: FACTS AND FIGURES

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**Abstract:** *The creative economy is one of the most recent developments in the global economy, compared with global shifts such as globalisation or major structural changes. The emergence of the creative economy reflects this global change and the shift toward a tertiary economy, where creativity, cultural and scientific contribution of employed people are the most defining traits. In this paper, we are presenting, after brief theoretical insights, some figures revealing the place of creative sectors in the global economy, including an evolution of its contribution. Both exports and imports of creative goods and services have registered constant growing during the last years, and the value of exports surpasses the value of imports. Moreover, in the global trade, commercialising creative goods is more profitable than commercialising creative services. Cultural and creative industries contribute to economic development and modernising the structure of the economy, by fostering the development of other vital sectors, such as sectors directly related to digital transformation, sectors related to leisure activities, cultural and touristic attractions etc. Not only its contribution to GDP formation, to employment or turnover, but also its resilience to crisis and difficult economic times make this sector one of the most reliable in the economy, explaining the interest of political factors for creating the framework for its continuous development.*

**Keywords:** *creative economy; performances; exports; imports; turnover; professional activities.*

**JEL classification:** *F14; L84.*

### **1. What is so particular about the creative economy?**

The emergence of a so-called "creative economy" reveals a structural shift in the global economy, in line with globalisation (Badulescu, D. 2007) and structural transformation to tertiary economy, culture, leisure, tourism and services (Badulescu, A. 2004).

The creative economy was defined, in the seminal work of Howkins, as "the transactions of creative products that have an economic good or service that results from creativity and has economic value" (Howkins 2001, p. 8).

Moreover, the creative economy became a familiar concept to us in the last years as a new economic trend, a new way of understanding and separating the economic activities. The creative economy praises and glorifies the human resource, the talent, the intellect, the creativity. Through the creative economy, there is a way to value distinctively the creation emerged out of innovation, talent, intellect or creativity.

A clear definition is given by UNCTAD, considering the creative economy as "an evolving concept based on creative assets potentially generating economic growth and development"(UNCTAD, 2010:10). They also pointed out some positive aspects of the creative economy, such as (UNCTAD, 2010:10):

- Generates incomes, creates jobs and exports;
- Social inclusion and cultural development are promoted;
- The human resources aim development;
- Implies a mix of economic, social and cultural aspects;
- Its economic activities are talent or knowledge – based;
- Feasible development option.

Despite of the fulminant development of the literature approaching cultural and creative economy, cultural and creative industries and lots of related concept, there are still many confusions and a lack of clarity in defining the concept and shaping the content of activities.

## 2. Measuring the creative economy

### 2.1. Global trade of creative goods and services

One of the advantages or positive aspects brought by the creative economy are the earnings from exports. Even if the economic activities compiled into the creative economy produce creative goods or provide creative services, all these can be object of international trade affecting the trade balance of the country. In the days of globalisation, there are no boundaries or limits in purchasing goods or services from abroad.

In the following table are presented some figures regarding the worldwide export of the creative goods and services, as well. The export of creative goods concerns goods such as art crafts, audio visuals, design, video games, performing arts, publishing and visual arts. It also concerns the earnings gained through exports during 13 years. The design has earned the most substantial while the performing arts are ranked as the lowest exporting, but it can be explained by the Indivisibility of these products.

**Table 1:** Worldwide exports of creative goods and services (millions dollars)

Product / Year	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15
<b>Creative goods</b>													
Art crafts	22 445	24 560	26 371	28 445	31 241	32 788	27 122	31 597	36 004	36 406	39 282	40 460	35 720
Audiovisuals	12 468	13 962	15 388	15 470	37 544	38 576	33 226	35 506	36 218	30 695	24 979	24 129	21 875
Design	132 889	153 217	171 452	186 382	215 150	237 164	210 320	240 560	299 071	326 597	342 315	385 902	318 216
Video games, other	9 482	10 222	12 595	16 082	37 375	46 916	39 530	40 454	40 570	41 563	39 155	41 149	42 194
Performing arts	3 203	3 684	3 860	3 999	4 587	5 086	4 197	4 630	5 192	5 253	5 176	5 278	4 387
Publishing	33 868	37 567	39 659	41 833	45 525	48 695	40 161	40 468	43 190	40 148	40 546	39 636	33 661
Visual arts	17 671	19 981	22 268	25 201	29 199	29 948	22 728	26 551	31 290	39 232	40 334	40 637	53 700
TOTAL	232 026	263 194	291 592	317 413	400 620	439 172	377 284	419 766	491 536	519 894	531 788	577 191	509 753



Product / Year	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15
<b>Creative services</b>													
Advertising, market research	50	56	147	247	403	619	431	334	477	-	-	-	-
Architectural, engineering and other technical services	86	93	129	169	183	435	408	447	626	-	-	-	-
R & D	10	14	34	55	65	103	80	101	119	-	-	-	-
Personal, cultural and recreational services	119	215	92	82	107	79	78	95	126	97	-	-	-
Audiovisual and related services	23	47	64	51	76	38	40	69	56	-	-	-	-
Other other personal, cultural and recreational services	96	168	28	32	30	41	39	26	70	-	-	-	-
<b>TOTAL</b>	<b>384</b>	<b>593</b>	<b>494</b>	<b>636</b>	<b>864</b>	<b>1315</b>	<b>1079</b>	<b>1072</b>	<b>1474</b>	<b>97</b>	<b>-</b>	<b>-</b>	<b>-</b>

Source: designed by the author based on the information from: <http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=14772> , <http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx> accessed on 07.04.2017

Regarding the exports of the creative services, the services involved in this measurement are: advertising and market research, architectural, engineering and other technical services, research and development, personal, cultural and recreational services, audio visuals and related services, etc., but the data provided concerns only a period of time of 9 years. In this area, the highest values are registered by the exports of personal, cultural and recreational services and the lowest by research and development even if during the time the amount increased drastically.

On the other hand, overall the values are lower than the value of exports, and also, the design appears as the most imported and the performing arts, the less.

Regarding the services, the activities of research and development are still the less imported, but this time the most worldwide imported activities are represented by Advertising, market research.

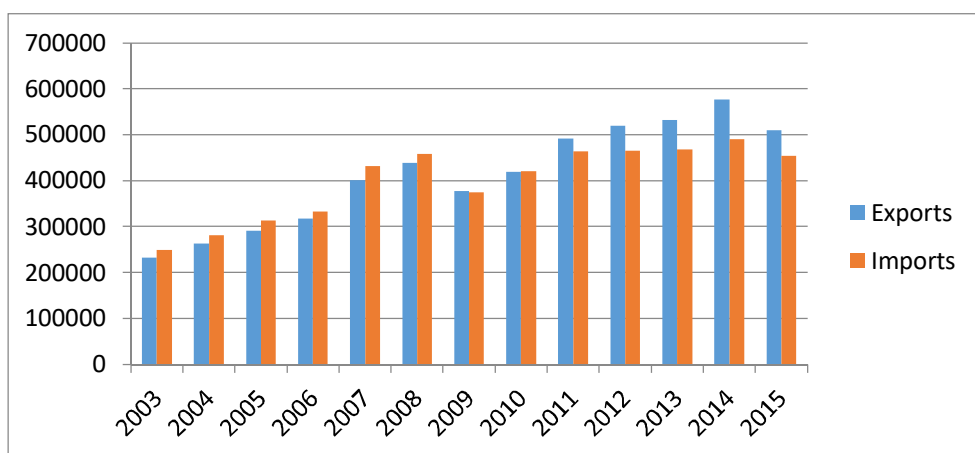
**Table 2:** Worldwide imports of creative goods and services (millions dollars)

Product / Year	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15
<b>Creative goods</b>													
Art crafts	23 155	25 817	26 977	28 110	30 696	30 187	24 436	28 239	30 911	90 867	32 427	35 796	28 453
Audiovisuals	13 926	15 887	17 056	16 863	40 689	41 643	33 686	35 562	36 983	28 715	26 766	26 540	21 483
Design	144 844	164 987	187 066	197 986	229 500	245 503	201 378	233 615	267 981	281 127	284 895	301 949	267 692

Product / Year	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15
Video games, other	11 832	11 919	14 385	18 362	46 202	56 581	48 509	50 964	48 698	47 925	46 677	49 806	47 145
Performing arts	3 519	4 056	4 312	4 520	4 997	5 550	4 623	4 981	5 408	5 431	5 171	5 379	4 728
Publishing	34 712	38 496	41 251	43 324	47 533	50 032	41 031	41 564	43 815	40 817	39 601	38 262	32 317
Visual arts	17 012	20 021	21 635	24 125	31 592	29 379	20 267	25 151	30 049	30 748	31 848	32 892	52 577
<b>TOTAL</b>	<b>249 001</b>	<b>281 185</b>	<b>312 681</b>	<b>333 289</b>	<b>431 210</b>	<b>458 875</b>	<b>373 931</b>	<b>420 074</b>	<b>463 845</b>	<b>465 386</b>	<b>467 386</b>	<b>490 624</b>	<b>454 395</b>
<b>Creative services</b>													
Advertising , market research	35	43	94	105	106	190	144	104	174	-	-	-	-
Architectural, engineering and other technical services	189	160	158	176	219	364	360	288	539	-	-	-	-
R & D	5	2	21	19	14	30	23	20	31	-	-	-	-
<a href="#">Personal, cultural and recreational services</a>	101	140	108	94	104	204	213	263	327	432	-	-	-
Audiovisual and related services	25	37	88	71	61	130	160	226	277	257	-	-	-
Other other personal, cultural and recreational services	76	103	20	23	43	73	52	38	51	-	-	-	-
<b>TOTAL</b>	<b>431</b>	<b>485</b>	<b>489</b>	<b>488</b>	<b>547</b>	<b>991</b>	<b>952</b>	<b>942</b>	<b>1 399</b>	<b>689</b>	<b>-</b>	<b>-</b>	<b>-</b>

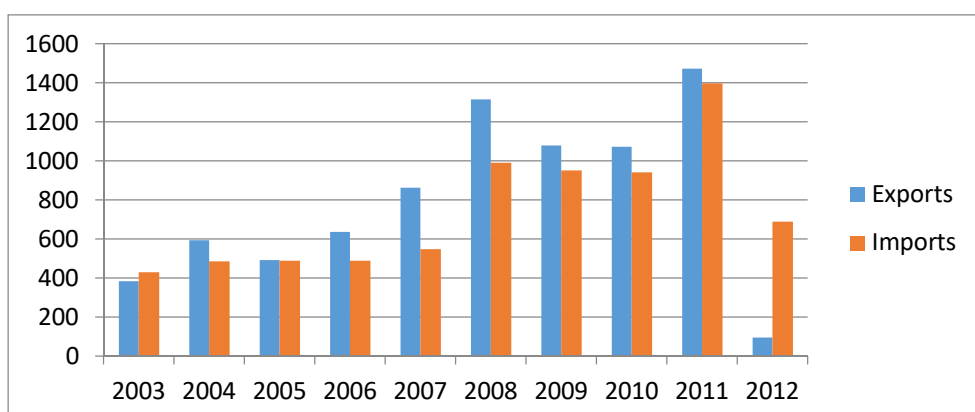
Source: designed by the author based on the information from:  
<http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx>,  
<http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx> accessed on  
07.04.2017

The most important aspects is that in the both cases, creative goods and creative services, the trade balance is positive, the value of exports being higher than the value of imports. In global trade, commercialising creative goods is more profitable than commercialising creative services, first of all due to the availability of the goods and indivisibility of the services.



**Figure 1:** Exports and imports of creative goods

Source: data provided by UNCTAD, accessed on 14.04.2017



**Figure 2:** Exports and imports of creative services

Source: data provided by UNCTAD, accessed on 14.04.2017

## 2.2. The turnover of selected "creative" economic activities

One of the parts of the creative economy can be seized through the turnover realised in the professional, scientific and technical activities. These activities are grouped by the Statistical Classification of the economic activities in the European community and involve several specialised activities, requiring a high degree of training, such as (NACE Rev. 2, 2008: 265 – 271):

- Legal and accounting activities
  - legal representation before judicial bodies, advising and representing in civil, criminal and labour disputes cases;
  - preparation of deeds, wills, trusts, legal documents linked to company formation, intellectual property rights;
  - auditing accounting records.
- Activities of head offices, management consultancy activities
  - advising and assisting businesses in strategic planning, production scheduling, financial budgeting, human resources practices, etc.;

- public relations and communication.
- Architectural and engineering activities
  - architectural consulting activities, city planning, landscape architecture;
  - Engineering design, etc.
- Scientific research and development regarding natural sciences and engineering and, social sciences and humanities
  - Basic research – in order to acquire new knowledge without application or use;
  - Applied research – in order to acquire knowledge directed to a specific application or use;
  - Experimental development – work based on previous knowledge or experiences in order to produce something new or to improve substantially.
- Advertising and market research
  - creation and placement of advertising campaigns in media, periodicals and newspapers, TV and radio;
  - distribution and delivery of advertising materials;
  - sites design;
  - media representation;
  - market research and public opinion polling, market potential investigation, etc.
- Other professional, scientific and technical activities
  - specialised design activities: fashion design, interior decoration, industrial design, graphic design, etc.;
  - photographic activities: production of commercial and consumer photography;
  - translation and interpretation activities;
- Other: services for commercial clients such as: brokerage, real estate, insurance, weather forecasting, environmental consulting, theatrical production or other entertainment carried out by agencies;
- Veterinary activities.

All these activities are results of intellectual processes and the figures below show an expected fluctuation of the turnover during these particular years. The reason we said the fluctuation was expected, was because of the analysed period of time, starting with the debut of the economic crisis. The most of the countries faced difficulties after 2008 and the figures dropped; some of them recovered easier and faster, such as Netherlands. The highest values belong to the developed economies, having the United Kingdom in the leading position. Hungary, Romania and Bulgaria registered much lower turnovers during these times then the other countries, but it could be also explained by low rates of services in these countries. Regarding the data covering the creative and cultural industries (CCI) in European Union, Eurostat provides statistical data through two databases, namely Structural Business Statistics (SBA) and Business Demography (BD). SBS cover the business economy, including the following cultural sectors: J5811 Book publishing, J5813 Publishing of newspapers, J5814 Publishing of journals and periodicals, J5821 Publishing of computer games, J59 Motion picture, video and television programme production, sound recording and music publishing activities, J60 Programming and broadcasting activities, J6391 News agency activities, M7111 Architectural

activities, M741 Specialised design activities. Cultural sectors of NACE: R90 Creative, arts and entertainment activities and R91 Libraries, archives, museums and other cultural activities are outside this scope.

BD covers the following cultural sectors: J59 Motion picture, video and television programme production, sound recording and music publishing activities, J60 Programming and broadcasting activities, M741 Specialised design activities; as well as market oriented enterprises in R90 Creative, arts and entertainment activities and R91 Libraries, archives, museums and other cultural activities. (<http://ec.europa.eu/eurostat/web/culture/enterprises-cultural-sectors>).

Creative and cultural industries reported for 2012 revenues of 535.9 billions euro, contributing to 4.2% of the EU GDP, being also the 3rd largest employer, after construction and food and beverage service activities (Creating Growth, 2014, p. 10). CCI presents also as a more resilient industry during crisis times. As reported in Creating Growth report (2014, p. 10), job creation in this sector grew on average by 3.5% a year from 2000 to 2007, and continued to grow at 0.7% annually between 2008 and 2012, even as the number of jobs in the rest of the economy fell 0.7%.

In the next tables, we present several figures regarding evolution of turnover 2008-2014 in selected countries (Table 3), respectively the evolution of number and average size of enterprises in the most significant cultural for EU as aggregate, 2011-2014 (Table 4).

**Table 3:** Turnover of the professional, scientific and technical activities, selected countries (millions EUR)

Country / Year	2008	2009	2010	2011	2012	2013	2014
<b>Bulgaria</b>	2788.3	3014.5	2529.6	2724.4	2722.1	2635.6	2850.6
<b>France</b>	200764	183277	209373	218784	224524	220315	187168
<b>Germany</b>	192351	203033	204710	222727	228480	242661	278658
<b>Hungary</b>	10807.7	9914.6	9714.8	9549.2	8878.6	9083.2	9774
<b>Italy</b>	118044	100972	115413	109781	106316	102046	103810
<b>Netherlands</b>	73848.7	70905.4	73844.3	74322.5	74784	78881.8	779987.1
<b>Romania</b>	8411.9	6770.5	6791.1	7252.3	7491.7	7022.6	7433.2
<b>UK</b>	242377	210458	222555	230315	256884	268042	298447

Source: designed by the author based on the information from: <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tin00149&plugin=1> accessed on 14.04.2017

**Table 4:** Number and average size of enterprises in the cultural sectors by NACE Rev. 2 activity, EU (28 countries)

Sector / year	2011	2012	2013	2014
<b>Total</b>	:	:	:	702.971
<b>Book publishing</b>	29.362	27.728	28.503	29.123
<b>Publishing of newspapers</b>	7.430	7.374	7.654	7.447
<b>Publishing of journals and periodicals</b>	20.956	21.332	20.795	21.235
<b>Publishing of computer games</b>	:	:	:	2.000
<b>Motion picture, video and television programme production, sound recording and music publishing activities</b>	112.265	120.192	130.000	138.246

Sector / year	2011	2012	2013	2014
Programming and broadcasting activities	11.912	11.780	11.716	12.000
News agency activities	9.000	9.000	9.626	9.621
Architectural activities	311.252	308.777	303.454	306.179
Specialised design activities	143.029	155.939	163.057	177.120

Source: Eurostat, [cult\_ent\_num],  
[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=cult\\_ent\\_num&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=cult_ent_num&lang=en),  
 accessed on 21.04.2017

## Conclusions

Cultural and creative industries as part of the newly emerged "creative economy" refers to business sectors and activities highly impacting the contemporary development of national economies, especially for the developed economies, where creativity and innovation actually drive the economic development. CCIs reported during recent years a very substantiation expansion in terms of contribution to GDP, employment, turnover, number of enterprises, contribution to export and imports etc., including more resilience to difficult crisis times. CCIs are also catalysts for other related sectors, e.g. leisure and tourism industries. For example, cultural attractions are among the most important tourist attractions, while activities such as reading books or watching movies or artistic performances are among the most common activities for spending time and leisure. In the same time, the digital and technological transformation and the created eco-system foster the dynamics of CCIs, contributing to its enhanced resilience. Due to the existing driving factors and conditions, e.g. educated and creative labour force, strong market potential for culture and leisure industry, as well as institutional framework and corporate governance (Badulescu and Badulescu, 2008), unleashing the huge potential of CCIs becomes a matter of economic policy orientation for the next years, both for EU as for national economies targeting economic development and modernisation of the economy. Indeed, many leisure and tourism activities can further benefit from the development of CCIs and could moreover contribute to enhancing entrepreneurship in these sectors, fostering economic development and social and cultural empowerment (Mester et al, 2008; Badulescu and Badulescu, 2014; Badulescu et al, 2014; Badulescu et al, 2015).

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## CONVERGENCE IN GOVERNMENT SPENDING. AN ECONOMETRICAL APPROACH

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**Abstract:** *The government systems differ across and between countries due to different political traditions and historical processes, which explains how each national system is adapted to the economic and social changes throughout time. The share of government spending in GDP and also its share in GDP is important in any study of public sector because data are more readily available and easier to quantify than regulatory measures. To establish the degree of convergence in government spending, we focus primarily on presenting one of the concepts that was imposed in the convergence process, namely the beta convergence. We also present some of the theoretical background as fundamental research on fiscal convergence, which is relatively limited. In the empirical part of the analysis, we study the degree of fiscal convergence of the 28 European Union member countries, using as indicator the volume of general government expenditure during 2004 - 2014. We have chosen this time frame as it includes the largest single expansion of the European Union integration process and together with the pre-, the crisis and the post-crisis period. The methodology which is widely used in the professional literature is the one of Barro and Sala-i-Martin, which implies the estimation of an equation regarding economic growth. Therefore, in our paper we employ the Barro and Sala-i-Martin methodology as presented, above in order to determine if there is a convergence process or rather a tendency towards divergence amongst the 28 European countries, taking into consideration the evolution of the general government expenditure. Results indicate that countries with lower initial level of general government expenditure per capita revealed its faster growth rate, while those with higher initial level of general government expenditure per capita exhibited its slower growth rate during the period 2004-2014.*

**Keywords:** *government expenditures; beta convergence; European Union.*

**JEL classification:** *H53; O47; C22.*

### Introduction

The purpose of this paper is to analyze the degree of fiscal convergence of the 28 EU member states, using as indicator the volume of general government expenditures. We will focus primarily on presenting one of the concepts that was imposed in the convergence process, namely the beta convergence and also some of the theoretical background as fundamental research on fiscal convergence. In the second part of the research we will present the data and also the methodology which is widely used in the professional literature and that implies the estimation of an equation regarding the economic growth. In the last part of the analysis we will present our empirical findings regarding the process of convergence in public sector activity, namely government expenditures.



## 1. Beta convergence and convergence in government spending

One of the concepts that have imposed itself in the process of convergence is the beta convergence. It is based on the neoclassical growth theory and was introduced in the economic literature by Barro and Sala-i-Martin (1992 and 1991:112).

Although it has been challenged by some economists such as Friedman (1992) and Quah (1993) who states that their regression model of the economic growth can give a wrong indication of the presence and extension of beta convergence, the concept has been widely employed in the economic literature (Boyle, McCarthy, 1997: 258). It has become indispensable as an instrument in the computing and econometric analysis as well as the description of this process, used either in its simple form (absolute beta convergence) or in its developed form (beta conditional convergence).

The concept of beta convergence can take three basic forms, within the range allowed by the neoclassical model of convergent growth (Iancu, 2009: 25):

a) the *absolute beta convergence* is the alternative that only takes into consideration the assumption of the high growth rates of the poor countries as against the rich ones, irrespective of the differentiated evolution of the sample countries of the determinants of growth (technological, institutional, and behavioral). Thus, it is necessary to find those solutions that are based on realities, but not exceeding the limits of neoclassical methodological area.

b) the *beta convergence clubs*, include in the studied panel, those countries/ regions that show some technological, institutional and economic policy homogeneity. The main assumption accepted for this solution requires that the same group should not show significant initial differences among the countries/regions of the club as regards the GDP per capita (Iancu, 2007: 35).

c) the *conditional beta convergence*, that takes into account the assumption that the average growth rate of an economy is an increasing function of its distance from its balanced growth level of income (Young, Higgins and Levy, 2008: 1085).

Barro and Sala-i-Martin (1992: 224) states that given the fact that countries initially poor will grow faster than the initially more affluent ones, the absolute beta convergence process takes place, this means on the one hand, a gradual reduction of the coefficient of variation of GDP/capita, and on the other hand, a reverse relation between the growth rate of GDP per capita and the initial level of GDP/capita. Given that countries have different structural features; these will tend to different levels of equilibrium income, thus registering a conditional beta convergence process.

Starting from the methodology used by Barro and Sala-i-Martin to measure the beta convergence, in the statistical and econometrical analysis, we will investigate the fiscal convergence in the 28 Member States of the European Union. This methodology applied to fiscal convergence shows that the process of convergence exists if the countries with a low level of public expenditure per capita exhibit a growth rate higher than countries with a high per capita government spending.

The economic literature regarding the convergence of government spending is quite limited. A relevant study is the one of Scully (1989): basing his study on data regarding economic growth for 115 market economies between 1960 and 1980, he finds that nations with relatively large government share in 1960 generally grew more slowly than nations with relatively small public sectors. His regression analysis also reveals that the coefficients of the government share were sufficiently large to

indicate a substantial depressing effect on economic growth. Romero-Avila and Strauch (2008) used time series to investigate whether there have been persistent trends in economic growth and fiscal variables over the last 40 years. The results indicate that government consumption and transfers negatively affect GDP per capita growth rates, while public investment has a positive impact on growth rates for 15 selected European Union countries between 1960 and 2001. Vojinovic, Prochniak and Oplotnik (2015) examine the influence of the EU integration process on the area of local self-government in selected EU member states. They proved that convergence really occurred at a significant rate during 2004 - 2013 as well as during the sub period 2004 to 2009, while during the sub period 2010 - 2013 some divergence or slowing down in convergence has been present.

## 2. Empirical findings of beta convergence processes

In the empirical part of our analysis, we will investigate the degree of fiscal convergence of the 28 EU member states, using as indicator the volume of general government expenditure for the period 2004 - 2014. This time frame was chosen, as it includes the largest single expansion of the EU integration process and in the meantime the pre-crisis, crisis and the post-crisis period.

The research is based on the most recent data available from the Eurostat Government Finance Statistics and OECD data base for 2014. The methodology, widely used in the economic literature is the one of Barro and Sala-i-Martin, implies the estimation of an equation regarding economic growth, and it is based on the so called catching up process in which macroeconomic variables, like GDP per capita or the general per capita government expenditures, grow faster in those countries which record a low level of these variables.

In our paper we will use the same methodology to establish whether there is a convergence process or rather a tendency towards divergence amongst the selected 28 European countries. The methodology used to measure the  $\beta$  convergence generally involves estimating a growth equation in the following form (Barro and Sala-i-Martin, 1990: 17, Vojinovic, Prochniak and Oplotnik, 2015: 833):

$$\log \left( \frac{y_{t_0+T}^i}{y_{t_0}^i} \right) = \alpha - \beta \log(y_{t_0}^i) + \varepsilon_{t_0, t_0+T}^i \quad (1)$$

where:

$y_{t_0}^i$  - the initial level of the volume of general government expenditure per capita in  $t_0$ ;

$y_{t_0+T}^i$  - the level of the volume of general government expenditure per capita at the end of the period;

$\varepsilon_{t_0, t_0+T}^i$  - the residual random variable;

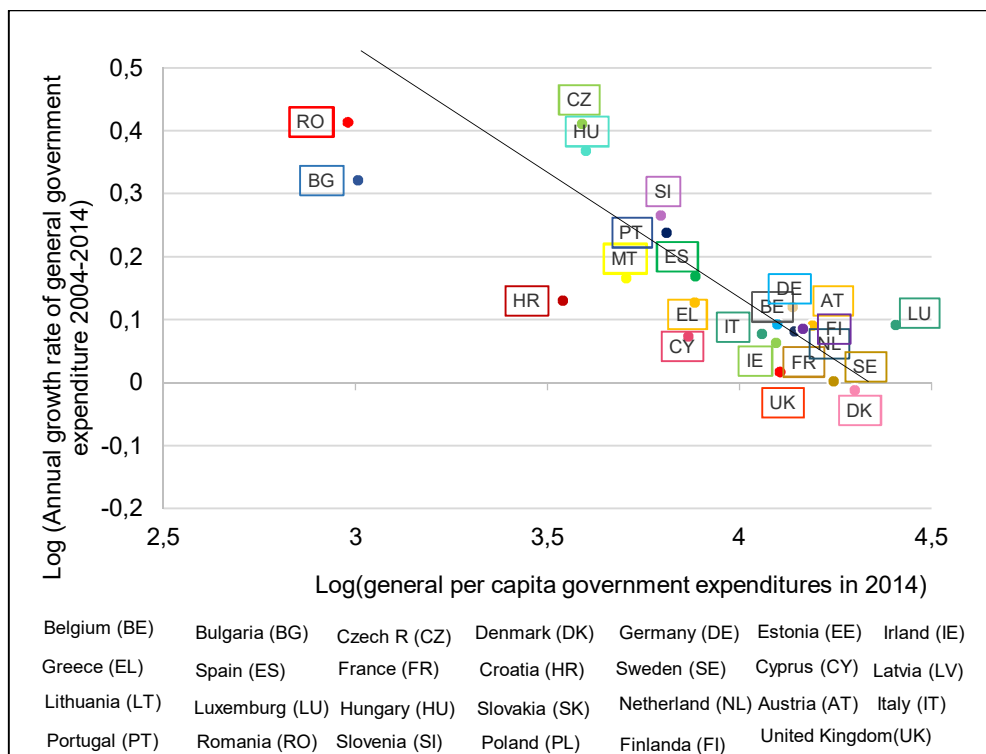
$\alpha$  - constant (absolute term);

$\beta$  - the parameter that expresses the inclination of the regression line;

$i$  - country (the 28 member states of the European Union).

The convergence process exists when a negative relationship between the variable's growth rate and the initial level is significant. So, the negative sign of the  $\beta$  parameter is the expression of the inverted relation between the average annual growth rate of the general government expenditure per capita and the initial level of the government expenditures per capita (for instance, when the rich countries experience a higher growth than the poor ones).

We have first drawn a graph that is indented to reveal a relationship between the above mentioned variables.



**Figure 1:** Annual growth rates of general per capita government expenditures between 2004 and 2014 and the initial level of per capita general government expenditures

Source: created by the authors

As seen in Figure 1, the new EU member states recorded a lower level of per capita general government expenditures and higher growth between 2004 and 2014 than the older EU member states. The position of certain countries on the graphic and also the negative slope of the regression line, confirms the beta convergence hypothesis, according to which the initially poorer countries have the tendency to grow faster than the initially rich ones. Regarding the initially poorer countries, the graph reveals that these countries have an initially lower level of per capita general government expenditures and a higher average annual growth rate - Romania, Bulgaria, Czech Republic and Hungary (on the left upper side of the graph), while the countries that in 2004 presented a higher initial level of general per capita

government expenditures, such as Denmark, Sweden, France, Finland, UK recorded between 2004 and 2014 a decreased or even negative economic growth (these countries are to be found on the lower right side of the graphic).

In order to investigate the validity of the hypothesis on which the regression model is based on, we will use various statistical tests. To determine model parameters we will use the generalized least squares method and the estimation of the parameters will be done using Eviews software. The results are:

**Table 1:** The regression model parameter estimates

Dependent Variable: LOG(GROWTH RATE)				
Method: Least Squares				
Included observations: 28				
LOG(GROWTH RATE)= $\alpha$ + $\beta$ *LOG(GOVEXPEND)				
	Coefficient	Std. Error	t-Statistic	Prob.
$\alpha$	4.128786	0.444303	9.292733	0.0000
$\beta$	-0.412662	0.050513	-8.169414	0.0000
R-squared	0.719644	Mean dependent var		0.518724
Adjusted R-squared	0.708861	S.D. dependent var		0.452548
S.E. of regression	0.244182	Akaike info criterion		0.086947
Sum squared resid	1.550251	Schwarz criterion		0.182104
Log likelihood	0.782747	Hannan-Quinn criter.		0.116037
F-statistic	66.73933	Durbin-Watson stat		1.915859
Prob(F-statistic)	0.000000			

Source: authors' estimates using Eviews

The tendency of catching up of the richer economies by the poorest is reflected both by reducing the dispersion of general per capita government expenditures and by the negative sign of the annual rate of  $\beta$  convergence of general per capita government expenditures in the sample, all economies are assumed to converge towards the same steady-state.

The values of the estimated coefficients in our sample are  $\alpha = 4.128786$  and  $\beta = -0.412662$ . The  $\alpha$  coefficient represents the average annual growth rate of general government expenditures in case the initial level of general government expenditures per capita was zero, while the  $\beta$  coefficient shows the decrease of the average annual growth rate of general per capita government expenditures (the dependent variable) in case the initial level of general per capita government expenditures increases with a unit. Thus, based on our results, we can say that convergence really occurred at the significant rate and they indicate how countries exhibited beta convergence throughout all the examined period 2004-2014.

In order to test the significance of the parameters, we have used the Student test (Stancu, 2011: 62). If the t-statistic in absolute value is higher than the critical one (1.96 for a 5% significance level), all the parameters are significant. As seen in table 1, the  $\alpha$  parameter is significant for a significance level  $\alpha = 0.05$ , as  $t_{\text{calc}} = 9.29 > t_{\text{tab}} = 1.96$ . For parameter  $\beta$ , the value of the statistic of the test,  $|t_{\text{calc}}| = 8.16 > t_{\text{tab}} = 1.96$ ,

and the probability associated to  $\beta$  is zero. This confirms its the significance and the rejection of the null hypothesis  $H_0$ .

The results confirm that both parameters are significant in the sample as well as in the total population, so the model was correctly specified, identified and estimated. In our sample the intensity of the correlation is a strong one as the Adjusted R-squared value is 0.708861. The Fisher test confirmed the significance of the R-squared, since  $F_{calc} = 66.73$  is above  $F_{tab} = 3,10$ , the null hypothesis is rejected so the initial level of per capita general government expenditures has a significant influence on the annual growth rate of general per capita government expenditures, the intensity of the correlation in the total population being quite strong.

**Table 2:** Testing the model errors' related model hypothesis  $\varepsilon_t$

<p><i>Dependent Variable:</i> LOG(GROWTH RATE)  <i>Method:</i> Least Squares  <i>Included observation:</i> 28  LOG(GROWTH RATE)=4.128786-0.412662*LOG(GOVEXPEND)</p>		
Independence of errors (Durbin Watson Test)	DW <sub>calc</sub>	1.915859*
Homoscedasticity of errors (White Test)	F <sub>calc</sub>	1.689333 (Prob=0.2055)
Normality of errors (JarqueBera Test)	JB <sub>calc</sub>	0.603286 (Prob=0.739602)

\* For a  $\alpha = 0.05$  significance level, one exogenous variable and 28 observations, the Durbin-Watson critical values are:  $d_1 = 1.328$  and  $d_2 = 1.476$ .

Source: authors' estimates using Eviews

In what concerns the testing of the fundamental hypothesis regarding the errors of the model, here are our conclusions:

- *the independence of the residual variable  $\varepsilon_t$  hypothesis* is confirmed since the Durbin Watson statistic (1.915859) is greater than the critical value  $d_2 = 1.476$  and lower than  $4-d_2 = 2.524$ ;

- *the homoscedasticity of the residual variable  $\varepsilon_t$  hypothesis*, is confirmed, as the probability related to the Fisher statistic (Prob=0.2055) is higher than 5%, there is no correlation between the residual variable, the exogenous variable and the square of the exogenous variable;

- *the normality of the residual variable hypothesis*. The Jarque-Berra test, which is an asymptotic test, usable in the case of a large volume sample (Andrei and Bourbonnais, 2008: 113) confirmed the hypothesis, as the associated probability of accepting the null hypothesis (Prob=0.739602) is larger than 5%.

Results indicate that the countries with lower initial level of per capita general government expenditures revealed a faster economic growth than those with a higher initial level of per capita general government expenditures.

## Conclusions

The public sector, through taxation and expenditures, affects the allocation of resources in the economy. This raises a series of questions concerning the impact of government on resource allocation in the economic growth. Over time, European countries have a long tradition in terms of decentralization, although their systems

vary from a country to another, depending on several characteristics. To find out how this process has been implemented through integration of EU member states, we investigated the beta convergence using the general government expenditures between 2004 and 2014. The results indicate that the fiscal convergence really occurred at the significant rate and also that the convergence has been evidenced for all the countries. Therefore, we can affirm that the poorer countries that have registered a lower initial level of per capita general government expenditure revealed its faster growth (Romania, Bulgaria, Czech Republic), while countries that in 2004 had a higher initial level of general per capita government expenditures namely Denmark, Sweden, France, Finland or UK, had a low growth rate or even negative one between 2004 and 2014.

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# EMPIRICAL STUDY REGARDING THE FACTORS THAT INFLUENCE FOREIGN PARTICIPATION IN THE SHARE CAPITAL OF COMPANIES FROM NORTH-WEST REGION OF ROMANIA

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**Abstract:** *Investment flows represent a very important issue when we are talking about economic development at regional level. The existing stock of the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania recorded a slight growth until 2008 and then the values increased in a greater extent, reaching 2.506.631,9 thousands of euro at 31 december 2016 (ONRC, 2017). The number of firms registred from 1991 and existing on the market in North-West region of Romania increased annually, recording 8.226 in 2001 and 25.548 in 2016, as shown by Romanian National Trade Register Office statistics. The purpose of this study is to analyze the influence of some factors on the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania, during 2001-2015. The results obtained in this empirical study, realized using simple regression models, show that factors such as number of graduates, gross domestic product (GDP) and research&development expenditure have an important influence on the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania, while labour cost have a moderate influence. Between the value of subscribed capital in companies with foreign participation in the share capital in North-West region of Romania and the variables research&development, number of graduates, respectively gross domestic product, there is a direct and linear correlation and between the value of subscribed capital in companies with foreign participation in the share capital in North-West region of Romania and labour cost there is an inverse linear correlation. Our study suggests that, in order to attract more foreign investments, regional policy makers should support all businesses and institutions that can contribute to improving the level of the variables included in this research. Knowing the regional factors that attract foreign investments represent an important information that can contribute to outline economic policies at the level of the region.*

**Keywords:** *foreign subscribed capital; companies; North-West region; Romania.*

**JEL classification:** *F21.*

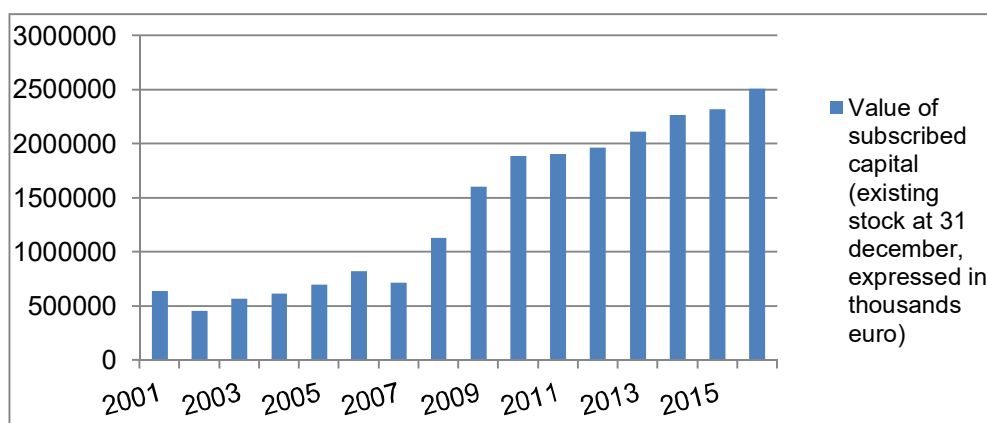
## 1. Introduction

Investment flows represent a very important issue when we are talking about economic development at regional level. Foreign direct investment (FDI) can contribute to a boost in economic growth and this is important especially in the case of developing economies. The numerous positive effects related to the FDI flows have led researchers to focus on the subject, to identify the factors that favor FDI inflows and also to examine their impact on the economy.

In this study we will analyze the factors that favor the registration of companies with foreign participation in the share capital from North-West region of Romania, as a part of FDI inflows to Romania, without taking into consideration other components of FDI (like reinvested earnings and intra-company loans). In Romania, there are eight regions of development, namely: North-East, South-East, South-Muntenia, South-West Oltenia, West, North-West, Center and Bucharest-Ilfov. The Romanian North-West region of development includes the counties Bihor, Bistrița, Cluj, Maramureș, Satu Mare and Sălaj.

The existing stock of the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania recorded a slight growth until 2008 and then the values increased in a greater extent, reaching 2.506.631,9 thousands of euro at 31 december 2016 (ONRC, 2017).

Figure 1 shows the evolution of the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania, during 2001-2016 (existing stock at 31 December), as provided by Romanian National Trade Register Office statistics.



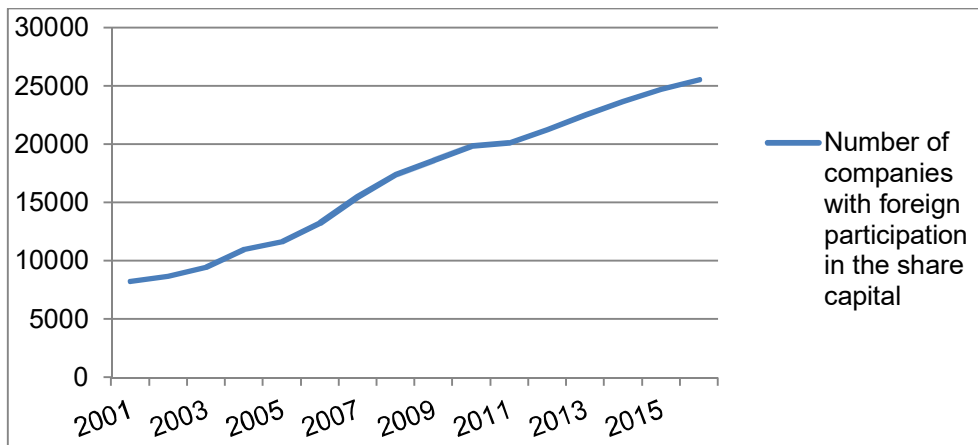
**Figure 1:** The evolution of the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania between 2001 and 2016 (existing stock at 31 December).

Source: realized by the author based on statistical reports of Romanian National Trade Register Office statistics, [Online], Available: <http://www.onrc.ro/index.php/ro/statistici?id=254>.

The number of companies registered from 1991 and existing on the market in North-West region of Romania increased annually, recording 8.226 in 2001 and 25.548 in 2016.

We can observe that economic and financial crisis didn't lead to a decrease in the number of firms with foreign participation in the share capital from North-West region. We can deduce that the firms were strong enough to resist to unfavourable economic conditions. Still, as expected, the rhythm of growth was slower from 2008 to 2011 but starting from 2012, the rhythm of growth increased significantly.





**Figure 2:** The evolution of the number of companies with foreign participation in the share capital from North-West region of Romania between 2001 and 2016.

Source: realized by the author based on statistical reports of Romanian National Trade Register Office statistics, [Online], Available: <http://www.onrc.ro/index.php/ro/statistici?id=254>.

In this research, our purpose is to analyze the influence of some factors the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania, during 2001-2015.

Taking into consideration previous studies in the field literature, we selected the following variables: graduates (as a proxy for human capital), expressed as the percentage of the population aged 25-64 who have successfully completed tertiary studies, GDP per capita, labour cost and total intramural R&D expenditure, expressed in euro per inhabitant. Section 2 of the paper presents the theoretical framework, section 3 includes the data and the methodology of research used, section 4 presents the results of the econometric modelling and section 5 of the paper summarizes the conclusions of the research.

## 2. Theoretical framework

The field literature is abundant in studies regarding foreign investments and this is due to the effects that they have at the level of the economies and due to their contribution to growth and development at the global level. As Borensztein et al. (1998) showed, foreign investment represent an important vehicle for the transfer of technology, contributing relatively more to growth than domestic investment. Also, researchers pointed out that FDI contributes to economic growth only when the host economy has sufficient absorptive capability of the advanced technologies. Loukil (2016) found a threshold value of technological development below which FDI have a negative impact on innovation and above which FDI have a significant positive impact on innovation, the absorptive capacity of and the complementary assets in the domestic sector being very important.

Hill and Munday (1992) analyzed the regional distribution of foreign investment within the UK, revealing that both financial incentives and access to markets represent important determinants of the regional distribution of new FDI projects and jobs. Loree and Guisinger (1995) used data from 1977 to 1982 to study the effects

of some policy and non-policy variables on the location of the new U.S. direct investment abroad (as distinct from reinvested earnings of existing affiliates). They found as significant influence factors investment incentives, performance requirements, host country effective tax rates, political stability, cultural distance, GDP per capita and infrastructure.

Broadman and Sun (1997) found that GNP, infrastructure development, the level of general education and coastal location determine the geographical distribution of FDI in China. Cheng and Kwan (2000) revealed that large regional market, good infrastructure and preferential policy had a positive effect on FDI, while wage cost had a negative effect in 29 Chinese regions from 1985 to 1995. Fung et al. (2002) analyzed the determinants of U.S. and Japanese foreign direct investment in China using the regional data set from 1991 to 1997. They found that the level of local GDP has a significant influence on FDI inflows from both sources, as well as policy variables. Labour quality influences in a greater extent Japanese investment than U.S. investment, while wage variable has a negative influence on foreign investments from both sources. Sun et al. (2002) considered the data from 30 provinces of China, from 1986 to 1998, and found GDP, wage, labour quality and infrastructure as important determinants of the distribution of foreign investments at regional level.

Erdal and Tatoglu (2002) analyzed the location-related determinants of FDI, between 1980-1998, and highlined that the location advantages offered by Turkey include market size, infrastructure, openness of the economy and market attractiveness. Deichmann et al. (2003) analyzed the regional determinants of FDI in Turkey and showed that agglomeration, depth of local financial markets, human capital and coastal access dominate location decisions taken by foreign investors.

Artige and Nicolini (2006) studied the main potential determinants likely to attract FDI in three European regions. Their results showed that, in Catalunya, market size, openness to trade, R&D effort and human capital attract foreign investments, in Baden-Württemberg FDI are attracted to the size the market and the labor productivity performance, while in Lombardia the important factors are the same, namely market size and its productivity performance.

Using data that cover the period 1997–2004, Bronzini (2007) focused on Italian industrial and service sectors and revealed that localization externalities encourage FDI inflows, whereas urbanization economies have no impact on inward foreign investment. Chidlow et al. (2009) analyzed the location determinants of FDI inflows into Poland, at a regional level and pointed out that knowledge-seeking factors but also market and agglomeration factors represent the main drivers for the inflow of foreign investments in the Mazowieckie region, while efficiency and geographical factors encourage foreign investments in other areas of Poland.

Villaverde and Maza (2012), in a study that covered the period between 1995 and 2005/2008, examined the regional distribution of FDI in Spain and the main determinants, and revealed that economic potential, labour conditions and competitiveness are important factors that attract FDI both at aggregate and sectoral levels, while market size is not important as booster of FDI.

Bortoluzzo et al. (2013) analyzed the determinants of the location of FDI across Brazilian states and revealed that FDI is positively correlated with consumer market size, quality of labor and transport infrastructure, and negatively correlated with cost of labor and tax burden. Dimitropoulou et al. (2013) found that existing regional specialisation is the single most important determining feature of where inward FDI

locates within UK, although other factors, such as regional R&D are also significant. Kersan-Škabić and Tijanić (2014) examined the regional determinants of foreign investment in Croatia and identified the factors that influence the unequal distribution of FDI. The authors showed that education, infrastructure, the manufacturing industry, dummy variables for areas of special state concern and capital city region have a positive influence, while unemployment and dummy variable for border regions with the EU have a negative influence on FDI.

### 3. Variables, data and research methodology

This research is meant to identify and study the correlation between the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania and several influence factors, listed below.

For this research, we have collected annual data regarding North-West region of Romania, over the period 2001 – 2015. We considered as influence factors on the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania (expressed in thousands of euro), the following variables:

- Graduates (as a proxy for human capital), expressed as the percentage of the population aged 25-64 who have successfully completed tertiary studies;
- GDP per capita, expressed in euro per inhabitant;
- Labour cost, expressed as the percentage change of average annual net wage;
- Total intramural R&D expenditure, expressed in euro per inhabitant.

Human capital, expressed by the number of graduates who have successfully completed tertiary studies, reflects not only simple workforce but also their skills and capabilities. This represent an important asset which can contribute to an increase in the value added created by companies and, thus, we expect to have a positive impact on the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania. The size of the market, proxied by GDP per capita, is expected to be a positive and significant influence factor of the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania because it reflects the level of regional development. Labour cost represents another variable that is usually followed by foreign companies because lower labour cost reduces the cost of production and can lead to an increase in the competitiveness of products. Another potential factor that can attract foreign investments is research & development expenditure, particularly for companies that activate in high and medium high-tech sectors, which are very interested in the level of technological evolution.

Data regarding the endogenous variable, the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania, was collected from Romanian National Trade Register Office statistics. The GDP per capita annual values, total intramural R&D expenditure values and number of graduates values were collected from Eurostat. Data regarding labour cost was provided by the website of Romanian National Institute of Statistics, TEMPO Online Database. Based on this data, we calculated the percentage change of average net wage for each year.

The research hypotheses that will be verified with the purpose of studying the correlation between the endogenous variable and the exogenous variables mentioned above, are the following:

H1: Increased number of graduates has a positive influence on the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania.

H2: Market size, reflected by Gross Domestic Product per capita, has a positive influence on the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania.

H3: Lower labour cost has a positive influence on the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania.

H4: Research&development expenditure has a positive influence on the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania.

Using Eviews software, we will develop simple regression models that will help us verify and validate the research hypotheses mentioned above.

#### 4. Results

In this section of the paper we will use simple regression models in order to identify the correlation between the variables exposed above. Also, we will determine the intensity of the correlation between the variables, analyse its shape, determine the model parameters and, finally, test the validity of the hypotheses.

Since the variables have an exponential evolution, we transformed the numerical values by logarithm. The variables chosen and their symbol are showed in table 1.

**Table 1:** Variables and their symbol

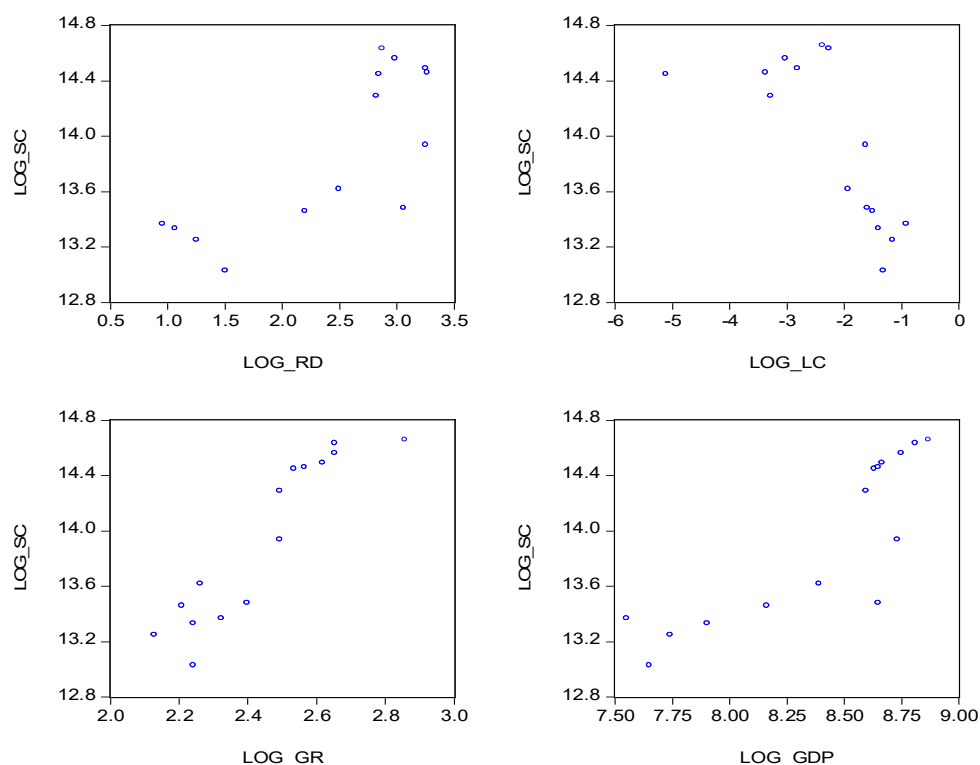
Name of the initial variable	Symbol for the initial data series	Symbol for the transformed variable
Value of subscribed capital in companies with foreign participation in the share capital in North-West region of Romania (existing stock at 31 December).	SC	LOG_SC
Graduates	GR	LOG_GR
GDP	GDP	LOG_GDP
Labour cost	LC	LOG_LC
Total intramural R&D expenditure	RD	LOG_RD

Source: realized by the author

Figure 3 shows the scatter plot between LOG\_SC and the exogenous variables and thus, describes the correlation between the exogenous variables and the endogenous variable, namely value of subscribed capital in companies with foreign participation in the share capital in North-West region of Romania (existing stock at 31 December).

From the below graphical representations, we can conclude that between the value of subscribed capital in companies with foreign participation in the share capital in North-West region of Romania and the variables research&development, number of graduates, respectively gross domestic product, there is a direct and linear correlation and between the value of subscribed capital in companies with foreign

participation in the share capital in North-West region of Romania and labour cost there is an inverse linear correlation.



**Figure 3:** The scatter plot between the value of subscribed capital in companies with foreign participation in the share capital in North-West region of Romania and the exogenous variables

Source: author calculus using Eviews

Next, we will use econometric modelling with the purpose of verifying the research hypotheses mentioned above. In this regard, we will develop simple linear regression models between the variable value of subscribed capital in companies with foreign participation in the share capital in North-West region of Romania, which is considered in the logarithmic form, and the selected exogenous variables, Table 2 presents some of the estimation results:

The intensity of the influence that each exogenous variable chosen has on the variable LOG\_SC is reflected by R-squared (the correlation coefficient). As shown in Table 2, the intensity of the correlation regarding the sample of observations is strong and statistically significant between LOG\_SC and the variables LOG\_GR, LOG\_GDP and LOG\_RD. The intensity of the correlation between LOG\_SC and the variable LOG\_LC is medium the sample level but is statistically significant at population level. It is a direct correlation from the LOG\_GR, LOG\_GDP, LOG\_GDP and LOG\_RD and reverse from LOG\_LC.

**Table 2:** Estimation results of linear simple regression model between the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania and the exogenous variables

Exogenous variable	R-squared $\hat{R}^2$	Fisher statistic $F_{calc}$	P	Coefficient of exogenous variable	t Statistic	P
LOG_GR	0.848	72.69	0.000001	2.6205	8.5264	0
LOG_GDP	0.728	34.94	0.000051	1.1030	5.9115	0.0001
LOG_LC	0.565	16.90	0.001227	-0.3971	-4.1110	0.0012
LOG_RD	0.602	18.21	0.001093	0.5209	4.2673	0.0011

Source: author calculus using Eviews

We can see that the coefficients are different from 0, the probability that they are null featuring in the last column of the table 2. The coefficients of labour cost and is negative, meaning that a raise of its value has a negative impact on the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania.

The validity of the models was confirmed by the tests relating to residual variable  $\varepsilon_t$ : White test for the homoscedasticity of the errors, Durbin Watson for the independence and Jarque Berra for the normality of errors.

Based on the above results, we can take the following decisions regarding our research hypotheses:

**Table 3:** Research propositions and related decisions

Research propositions	Decision
H1: Increased number of graduates has a positive influence on the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania.	Validated
H2: Market size, reflected by Gross Domestic Product per capita, has a positive influence on the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania.	Validated
H3: Lower labour cost has a positive influence on the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania.	Validated
H4: Research&development expenditure has a positive influence on the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania.	Validated

Source: author results using Eviews

## 5. Conclusion

The results obtained in this empirical study show that economic factors such as number of graduates, gross domestic product (GDP) and research&development expenditure have an important influence on the value of subscribed capital in companies with foreign participation in the share capital from North-West region of Romania, while labour cost have a moderate influence. Between the value of subscribed capital in companies with foreign participation in the share capital in

North-West region of Romania and the variables research&development, number of graduates, respectively gross domestic product, there is a direct and linear correlation and between the value of subscribed capital in companies with foreign participation in the share capital in North-West region of Romania and labour cost there is an inverse linear correlation.

Our study highlights the idea that foreign investors in companies from North-West region of Romania are interested in human capital and in the level of regional development that reflects the potential of consumption and profitability. Also, foreign investors in companies from North-West region of Romania are attracted by research&development expenditure as the level of technological evolution represents an important variable in the competitive struggle of firms on the market. From our research we found that labour cost is not as important for foreign investors as other variables included in the study, but still it represents an influence factor. Knowing the regional factors that attract foreign investments represent an important information that can contribute to outline economic policies at the level of the region. It is obvious that regional policy makers should support all businesses and institutions that can contribute to improving the level of these variables in order to attract more foreign investments.

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**SECTION: *FINANCE, BANKING, ACCOUNTING AND AUDIT***



# INFLATION ADJUSTED CHAIN LADDER METHOD AS A CHALLENGE TO ACTUARIES

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**Abstract:** *The Solvency II directive establishes a revised set of capital adequacy rules for insurance and reinsurance undertakings in the EEA. The starting point for assessing the available capital of an undertaking is to value its assets and liabilities. The liabilities of insurance undertakings include the technical provisions which constitute a significant proportion of their balance sheets. Under Solvency II the projection of run-off triangles is one of the allowed methods for valuing the technical provisions for non-life insurance business. This paper demonstrates how the Inflation-Adjusted Chain Ladder Method, a simple form of run-off triangle methods, can be used by a non-life insurer in determining the technical provisions for outstanding claims. The key assumption underlying this method is that, for each origin year, the amount of claims paid, in real terms, in each development year is a constant proportion of the total claims, in real terms, from that origin year. Activity and actuarial expertise is indispensable assurance business. Actuarial techniques in insurance helps strengthen prudentially insurance supervision, quality improvement and financial responsibilities of insurers and other professional participants of the financial market, increasing the role of risk management in insurance, strengthening capacity interdependence between auditors and actuaries in insurance, increase customer confidence, market development and compliance with European standards. Insurance companies must ensure that the assumptions used in determining technical reserves, own funds and the Solvency Capital Requirement converge. The Chain-Ladder Inflation Adjusted Method involves taking inflation into account inflation index applied to claims from previous years and the forecast index applied estimated damage. The Basic Chain-Ladder Method data applied to the damages updated inflation index to estimate damages to be paid in the coming years, as applicable index forecasted to convert that amount into monetary values for each year. So this method differs from the Basic Chain Ladder Method that the data are expressed in current terms, while the basic method using data in constant terms.*

**Keywords:** *claims; chain-ladder method; damages; premium rates.*

**JEL Classification:** G22.

## 1. Introduction

When assessing the solvency position of any company it is necessary to analyse its assets and its liabilities and to understand how these are valued. For insurance companies the technical provisions are a significant part of the liabilities.

The technical provisions of a non-life insurer consist of provisions for unearned premiums and provisions for claims losses. The technical specifications for Solvency II state that traditional actuarial techniques for valuing the best estimate for provisions for non-life insurance obligations include the projection of run-off

triangles (EIOPA 2012: 62). This paper describes one of these run-off triangle methods, the inflation-adjusted chain ladder method.

The paper introduces the concept behind the techniques and demonstrates how run-off triangles are constructed for both incremental and cumulative claims loss amounts. In business insurance statistical research plays an important role in estimating the insurance business and the prospects for achieving them. To this end, the events taking place in insurance are measured, orderly, systematic and aggregated by observation (collection), processing and analysis. The steps necessary for applying the Inflation Adjusted Chain-Ladder Method, for determining the reserve, are presented below by means of a practical example in the case of insurance company Groupama. Accumulating paid claims for insurance company Groupama are presented in the following table development (data are expressed in thousands of Euro).

**Table 1:** Incremental claims loss settlement data presented as a run-off triangle during 2012 - 2017 (thousand euros)

Claims occurrence year	Development period					
	0	1	2	3	4	5
2012	8.234	6.432	4.987	3.621	2.577	2.110
2013	7.481	4.301	3.789	3.123	2.3694	
2014	8.515	4.989	3.601	2.853		
2015	7.139	4.785	3.315			
2016	7.799	4.468				
2017	8.104					

Source: Processed by author

The annual inflation rate in the middle of each year in the period under review were:

**Table 2:** The annual inflation rate

Year	Inflation rate %
2012	3,3%
2013	4,0%
2014	1,1%
2015	0,6%
2016	1,5%

Source: Processed by author

Previous inflation matrix is calculated, from the previous inflation.

**Table3:** The Inflation Matrix

2012	2013	2014	2015	2016	2017
0,033	0,040	0,011	0,006	0,015	0,000
1,033	1,040	1,011	1,006	1,015	1,000
1,1090	1,0736	1,0323	1,0211	1,015	1,000

Source: Processed by author

In the second stage table shown below the inflation development:

**Table 4:** The inflation development

Claims occurrence year	Development period					
	0	1	2	3	4	5
2012	1,1090	1,0736	1,0323	1,0211	1,015	1,000
2013	1,0736	1,0323	1,0211	1,015	1,000	
2014	1,0323	1,0211	1,015	1,000		
2015	1,0211	1,015	1,000			
2016	1,015	1,000				
2017	1,000					

Source: Processed by author

In the third stage is adjusted by inflation causes damage which is calculated by multiplying the data cell by cell in the tables containing the initial damage development and inflation. Obtained new table containing the damage expressed in current prices.

**Table 5:** Inflation adjusted claims

Claims occurrence year	Development period					
	0	1	2	3	4	5
2012	9.131	6.905	5.148	3.697	2.616	2.110
2013	8.032	4.440	3.869	3.170	2.394	

Claims occurrence year	Development period					
	0	1	2	3	4	5
2014	8.790	5.094	3.655	2.853		
2015	7.290	4.857	3.315			
2016	7.916	4.468				
2017	8.104					

Source: Processed by author

In the fourth step The Basic Chain-Ladder Method is applied to the input data with the base table of the last development. This cumulative damage is obtaining following development table:

**Table 6:** Cumulative table with inflation adjusted claims with development factors

Claims occurrence year	Development period					
	0	1	2	3	4	5
2012	9.131	16.036	21.184	24.881	27.497	29.607
2013	8.032	12.472	16.341	19.511	21.905	
2014	8.790	13.884	17.539	20.392		
2015	7.290	12.147	15.462			
2016	7.916	12.384				
2017	8.104					
Development factors		1,6259	1,2931	1,1765	1,1128	1,0767

Source: Processed by author

The fifth stage is determined by dividing the developmental factors accrue each column in the previous column without last term.

In the sixth stage unsettled accumulated damage estimate using growth factors previously calculated.



**Table 7:** Cumulative development table completed with estimated amounts (thousand euros)

Claims occurrence year	Development period					
	0	1	2	3	4	5
2012	9.131	16.036	21.184	24.881	27.497	29.607
2013	8.032	12.472	16.341	19.511	21.905	23.585,1135
2014	8.790	13.884	17.539	20.392	22.692,2176	24.432,7106
2015	7.290	12.147	15.462	18.191,043	20.242,9926	21.795,5603
2016	7.916	12.384	16.013,7504	18.840,1773	20.965,3493	22.573,3916
2017	8.104	13.176,2936	17.038,2652	20.045,5190	22.306,6536	24.017,5739
Development factors		1,6259	1,2931	1,1765	1,1128	1,0767

Source: Processed by author

In the seventh stage to determine the estimated losses in simple values minus cumulative damage from the table above, column by column to give:

**Table 8:** Developing table

Claims occurrence year	Development period					
	0	1	2	3	4	5
2012	9.131	6.905	5.148	3.697	2.616	2.110
2013	8.032	4.440	3.869	3.170	2.394	1.680,1135
2014	8.790	5.094	3.655	2.853	2.300,2176	1.740,493
2015	7.290	4.857	3.315	2.729,043	2.051,9496	1.552,5677
2016	7.916	4.468	3.629,7504	2.826,4269	2.125,175	1.608,0423
2017	8.104	5.072,2936	3.861,9716	3.007,2867	2.261,1346	1.710,9203

Source: Processed by author

Inflation in the analyzed period is between 0.6% and 4%, and the forecast for the period 2018-2022 in the middle of each year is shown below:

**Table 10:** Inflation ratio

2017	2018	2019	2020	2021	2022
0,000	0,035	0,021	0,012	0,009	0,007
1,000	1,035	1,021	1,012	1,009	1,007
1,000	1,035	1,056	1,068	1,0782	1,085

Source: Processed by author

In the eighth round table is built for future inflation development on the basis of:

**Table 11:** Table of factors including development for suitable future inflation update

Claims occurrence year	Development period					
	0	1	2	3	4	5
2012						1,000
2013					1,000	1,035
2014				1,000	1,035	1,056
2015			1,000	1,035	1,056	1,068
2016		1,000	1,035	1,056	1,068	1,0782
2017	1,000	1,035	1,056	1,068	1,0782	1,085

Source: Processed by author

In the ninth round accumulating damage adjust to future inflation by multiplying data tables cell by cell development for future inflation and damage estimated simple values.

**Table 12:** Table development simple adjusted inflation forecast (thousand euros)

Claims occurrence year	Development period					
	0	1	2	3	4	5
2012	9.131	6.905	5.148	3.697	2.616	2.110
2013	8.032	4.440	3.869	3.170	2.394	1.738,9174
2014	8.790	5.094	3.655	2.853	2.380,7252	1.837,9606
2015	7.290	4.857	3.315	2.824,5595	2.166,8587	1.658,1423
2016	7.916	4.468	3.756,7916	2.984,7068	2.269,6869	1.733,7912
2017	8.104	5.249,8238	4.078,2420	3.211,7821	2.437,9553	1.856,3485

Source: Processed by author

The tenth step is determined based on the damage accumulated in the table above by adding the data column by column.

**Table 13:** Table of cumulative development (thousand euros)

Claims occurrence year	Development period					
	0	1	2	3	4	5
2012	9.131	16.036	21.184	24.881	27.497	29.607
2013	8.032	12.472	16.341	19.511	21.905	23.643,9174
2014	8.790	13.884	17.539	20.392	22.772,7252	24.610,6858
2015	7.290	12.147	15.462	18.286,5595	20.453,4182	22.111,5605
2016	7.916	12.383	16.139,7916	19.124,4984	21.394,1853	23.127,9765
2017	8.104	13.353,8238	17.432,0658	20.643,8479	23.081,8032	24.938,1517

Source: Processed by author

Reserve for unsettled claims is:

$$\text{RDN} = (24.938,1517 - 8.104) + (23.127,9765 - 12.383) + (22.111,5605 - 15.462) + (24.610,6858 - 20.392) + (23.643,9174 - 21.905) = 40.186,2919$$

### 3. Conclusions and recommendations

One of the most important operations carried out by the insurer is technical justification because:

- any analysis of financial position is based on how to set up technical reserves;
- undervalued leads to reduction of profit from investment activities;
- the use of ineffective methods may affect the financial soundness and profitability of the insurance company.

It is noted that if society were thoroughly grounded Groupama reserves taking into account inflation. Improper establishment of a reserve for unsettled damage could lead to imbalances in the insurer distributing dividends unfounded because it influences the size of the profit and that the actual company to make losses. Also, the insurer may seem creditworthy but solvency is also based on improper formation of reserves for unsettled damage.

The inflation-adjusted Chain-Ladder methodology incorporates an explicit allowance for past and future inflation. This method requires a triangle of paid claims and credible estimates of past and future inflation assumptions. Incremental payments in each calendar period are adjusted by past inflation to the same money terms. This way it assumes that the inflation-adjusted development is stable – so that the Chain-Ladder assumption can hold. Then the incremental values are restated again as a cumulative development triangle and the Chain-Ladder method is applied. Finally, as the payments will actually be paid in the future, incremental cash flows will be adjusted by the future inflation assumption to allow for this.

#### Advantages:

- The method is simple to apply.
- This method allows for explicit inflation assumptions to be made based on the expectations about future business environment.
- It also allows for sensitivities to be applied showing how the changes in future inflation affect the ultimate claim estimates.

#### Disadvantages:

- A credible estimate of past claims inflation is required. This is not straightforward to obtain, and relies on knowledge of the ultimate cost of claims for prior years, which is circular.
- This method is difficult to apply to incurred claims since the time basis of the outstanding claims is not always clear. For example, are they based on the cost of settling today or the cost at the expected settlement date? Also, how frequently are they re-assessed and adjusted for the time value of money?

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## EQUILIBRIUM MODEL OF BUSINESS ARCHITECTURE USING PREMISES OF AGENT-BASED MODELING

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**Abstract:** *Business strategy correlated with marketing and management actions are tested on the market. Their efficiency can be measured by looking at financial indicators. In order to be competitive on the market firms are striving to ensure values of financial results greater than the minimum threshold level of profitability. One way to achieve this goal is by correlating organizational structure of the business with its financial architecture. The need to find new ways of enterprise management that best fit the current economic context needs to create a link between financial structure of the business and its developmental goals. In this sense, the paper analyses the use of implementing project management as a solution to ensure company's performance by adapting financial architecture to business strategic goals. Businesses are seen as a "fractal structure" made up of projects developed according to objectives planned. Firm's have their own propensity to consume or to invest. Each propensity has its own specific implementation structure. Dynamic equilibrium of the firm is ensured between its investment projects and repetitive tasks that ensure continuity and survival of the business. Any risk appearing at micro level during project implementation is channeled into the business environment through agents' constraint. According to agent-based modeling an organizational environment is made up of various agents playing different roles. Their decisions affect equilibrium of the firm, acting in according to various criteria and restrictions. Agents' decisions are correlated to their objectives and degree of "risk tolerance". Elements of fractal theory, game theory, econophysics, behavioral finance and agent-based modeling are powerful tools to measure and estimate the optimal business strategy to getting sound financial results. The paper develops a mathematical equilibrium model of a business that connects strategic and operational level to financial architecture taking into account the agents' attitude to risk.*

**Keywords:** *strategic management; risk; agent-based modeling; fractals; propensity to consume/ invest; budget constraint.*

**JEL Classification:** *D92; L14; M21.*

### Introduction

Financial policy of enterprises has as main objective the financing of enterprises on the basis of efficiency and effectiveness criteria established and assumed by the management of each company. It includes aspects related to the optimal allocation of capital towards the achievement of business development objectives or projects. Decision to financing various projects managed by an enterprise is subordinated to going over several stages that succeed in time in a well-established order. The final outcome of the decision-making process is the choice of the most appropriate source of funding for projects managed by the enterprise (Popovici-Coita I.F., 2015).

Research related to the mechanism of financing a company's objectives has undergone various different steps in economic theory - from classical to modern-regarding equilibrium models of resource allocation. Current research paper deals with the analysis of relevant factors affecting financial decision under risk and uncertainty related to financing projects managed by enterprises. Individual decisions give form and structure to the economy. One cannot isolate notion of "decision" with that of the "economy". Also, investors or agents in the economy are primarily humans. Risks that may arise in financial decisions relate to human unpredictable nature (Popovici-Coita I.F., 2015).

### **1. Decision-making process on financing business at company level – factors involved**

Utility is another concept used in economics to describe human decision making. This is a trigger for financial decision. The differences between various decision alternatives are actually *stimulus* that triggers the decision-making process (Popovici-Coita I.F., 2015). The alternative choice that provides the highest *expected marginal utility* is preferred to *homo oeconomicus*. The fundamental assumption of classical finance is based on the concept of *homo oeconomicus* is characterized by rational behavior aimed at maximizing its "expected utility" (Neumann and Morgenstern 1944; Markowitz, 1952).

Analysts were just interested in measuring aggregate economic phenomena by the year 1970. Work of Robert Lucas (1995) brought to light the interest for micro level analysis. It attracted the attention of scientists that the implementation of policies is reflected by a number of decisions of the people. This raises the importance of the decision at company level and the solution found by the economic theory on this issue by implementing projects to achieve organizational goals (Popovici-Coita I.F., 2015).

Classical economic theory puts in the center of research the rational agent oriented towards maximizing its utility from every financial transaction. Modern theories like game theory, behavioral finance, economic psychology, agent-based modeling speak about agent's behavior that is guided by emotions reflected into strategies followed in order to maximize benefits from transactions whether it is about monetary return, psychological satisfaction or social benefits (Popovici et al. 2010, Popovici-Coita, 2015; Kahneman and Tversky, 1979; 1992; Kirchler et al., 2002; Kirchler, 2007).

### ***The company's portfolio of projects viewed as a „fractal structure”***

Any human activity may be defined as a process. A series of coordinated processes unique to a particular purpose arising in a project. The economy as a whole represents the summation of all individual project results so that the economy appears as a portfolio of projects. There are various links between objectives of various organizations and that of state institutions leading to a complex structure of the entire economy at local and national level. This structure involves an economic organization of activities of each entity either public or private according to the objectives of their individuals using projects to achieve them (Popovici-Coita, 2015). However, the concept of using projects to finance various objectives is structured according to the purpose for which it is designed for so that one can build a project to fulfill the consumption needs of human nature, material, financial or otherwise. Thus, any project needs an object set which fits a certain financial structure to ensure

achievement of that objective. It can be seen that it creates a network of links between concepts like: objective and project financing.

Economy can be seen as a network of projects driven by specific purposes. One can thus speak of a country's economy as a complex project. Its subcomponents are projects of territorial administrative units which are subdivided into various projects of their local communities. All projects that make up the economy are interconnected in a network of fractal nature (Popovici-Coita, 2015).

A project implemented by an organization that seeks to achieve its objectives in this way is led by the an individual agent called manager of the project. Agent theory tells us that between the agent and the owner of the company in whose name he acts, there are several conflicts involved between their interests and also due to temporal difference between short-term goals of the people and long-term goals of the company as a whole (Kahneman and Tversky, 1974; 1981). "Homo economicus" engages in various transactions bearing specific purposes. In order to achieve them he has available a number of "tools". He is "limited" by "inputs" or resources in order to reach the "outputs" of the intended purpose.

## **2. Business model premises of agents' based modeling**

This paper presents the model of business architecture used for financing a specific investment project by a company. Agent-based modeling offers an alternative to equilibrium equations measuring economic phenomena by introducing the measurement of variables in dynamics (Scarlat, Chiriță, 2001: pp.23-37). The model starts of the premises that economy is seen as being made up of a very big number of different agents continuously trading with one another (Kahneman, 2002; Macal and North, 2006; Taleb 2007). They play different strategies according to the purposes they follow. Each category of agents described in the decisional model presents a specific attitude towards risk. There are several category of subjects that may present either risk aversion or risk appetite in financial situations or switch between them (Popovici-Coita, 2015: 107-109; Kirchler et al., 2002)

Economic model described in this paper presents an approach to measuring financial balance at project level by inserting elements such as time in quantifying the different levels of revenue and expenditure. The reason why imbalances occur in the projects' budget between revenue and expenditure is due to the lack of synchronization between receipts and payments. Time factor entered into the equation is used to generate indicators in the model, such as velocity of cost ( $v_c$ ) and revenue ( $v_v$ ) (Popovici and Tulai, 2010a; 2010b; Popovici et. al, 2010; Popovici-Coita, 2015: 111-118). The utility of the model is to identify "risk areas" generated by the lower velocity of revenue ( $v_v$ ) overcome by superior velocity of cost ( $v_c$ ) due to the time sequence of receipts and payment during the life of a project. Capturing the gap between cost and revenue is quantified in the model by identifying an "area" bounded by the velocity of cost and revenue. This is the risky area called "profit or loss area" because it can reflect a risk of financial imbalance when the velocity graphics of cost is superior to that of revenue. The dimension of the „ risky area" is a warning sign to the project manager on the emerging risk of cost not being recovered from the revenue generated by the project (Popovici-Coita, 2015:112). Classical modeling based on equilibrium equations is trying to capture an image of



a state in time. Therefore, the analysis of the model in the flow of time is done in dynamics by using agent-based modeling.

### 2.1. Premises of the model

The agent facing business financing decisions may be the owner of the company, the shareholders, the project manager or the financial manager. No matter who is responsible for this decision, he will have to choose a financial architecture suitable for the activity developed, based on a detailed analysis between various financial sources. Agent-based modeling can be used for financing decisions because it provides a "smart" and "dynamical" tool for selecting appropriate sources of funding for the projects developed (Macal & North, 2006).

Modeling agent's financial decision involves applying selection criteria over financial under several restrictions (Bloomquist, 2004). The mechanism of selecting financing for projects is the subject of the model described. This process involves two subtasks, namely the comparative assessment of funding alternatives to be included in the model and the actual decision over the form of financing that will be used. The first step in the selection process refers to collecting information regarding possible ways to finance projects. The decision maker will make a comparative analysis between them choosing the option that will be used to finance a particular project.

The model considers the activity of an enterprise consisting of both repetitive and unique processes. Repetitive processes are taking place regularly, supporting the entire activity of the enterprise. These processes require a minimum level of strategy and their regularity supports businesses survival. Despite regular ones, activities trying to achieve developmental objectives treated as investments are unique. The latter are implemented through projects. Project management implies decision making aiming at achieving a unique goal in a limited period of time with specific allocation of human or physical resources to achieve it. The project, by its very complex structure, requires a more complicated decision-making process in contrast with the regular ones. Who is therefore the agent facing the decision of financing a project?

Activity of a company is shared between two main goals: one refers to ensuring continuity of its operations from one period to another and the second refers to business development made through investments. Every company has a certain propensity for consumption or in other words for spending to ensure its operating activities and a specific propensity for investments. These two indicators reflect the share of consumption and investment made from the disposable income of the company, after deducting tax expenses from the total revenue of the company. In the model analysis, revenue comes from business sales for its core functions and does not include the revenue generated from the installments generated by the external financing source accessed for project developing (Popovici-Coita, 2015: 127-129).

a) Depending on the two main objectives defined at *company level*, the *budget constraint* is as follows (Popovici-Coita, 2015: 127-129):

• Static balance equation:  $V_d = V(1-t) \Rightarrow V_c + V_i = V_d$

$$c * V_c + i * V_i = V'_d \Leftrightarrow c = \frac{\Delta V_c}{\Delta V_d}, i = \frac{\Delta V_i}{\Delta V_d}$$

• Dynamic balance is defined as:

$V_c$  = part of disposable income for operating activities  
 $V_i$  = part of disposable income for investment projects;  
 $c$  = rate of operating expenses or propensity for consumption  
 $i$  = rate of investment expenses incurred or propensity to invest  
 $t$  = tax rate (the average tax liabilities of the company)  
 $V$  = income or company's turnover;

$V_d$  - disposable income for consumption and investment within the enterprise;

$V'_d$  - disposable income effectively allocated to investment projects and consumption of the enterprise.

b) There can also be defined, at project level, the budget constraint with the following formula:

• equation of static equilibrium:  $V_d^p = V^p(1-t) \Rightarrow V_c^p + V_i^p = V_d^p$   
 • dynamic balance is defined as:

$$c * V_c^p + i * V_i^p = V'^p_d \Leftrightarrow c = \frac{\Delta V_c^p}{\Delta V_d^p}, i = \frac{\Delta V_i^p}{\Delta V_d^p}$$

Where all the indicators reflect values the project level as follows (Popovici-Coita, 2015: 127-129):

$V_c^p$  = share of disposable income for project operating activities;  
 $V_i^p$  = share of disposable income for project investment costs;  
 $c$  = rate of operating expenses or propensity for consumption at project's level;  
 $i$  = rate of investment expenses or propensity to invest at project's level;  
 $t$  = tax rate (the average tax liabilities at project's level)  
 $V^p$  = income from the projects' turnover;  
 $V_d$  - disposable income for realization and operating the investment made through the project  
 $V'_d$  - disposable income effectively allocated for realization and operating the investment made through the project

The *budget constraint equation* reflects the disposable income left after paying all tax liabilities. This in turn is shared between company's regular business functions and investment projects for business expansion. The first category of costs is incurred regularly at specific intervals of time. The second category of expenditure is used for investment, which is carried out along a limited period of time. Investment objectives are unique and can be implemented through a project aimed at establishing and operating that investment (Popovici-Coita, 2015:128-129). In general, investment objectives are of high financial values and the company is able to implement such objectives only by access to external financing, from financial market, in addition to its internal cash resources generated by economic activity of

the company. Access to external funding for investment involves a period when the reimbursement of the external financing takes place for a number of years.

## 2.2. Model description

The model is built starting from the principle of *budgetary constraint* of each individual, entity or project in the economy. The model is based on assumptions that any investment materialized through a project may support a cost in its budget endurance limit according to the maximum capacity of revenue generated. An investment achieved through a project involves access to a range of financial sources by paying a price, which generates a cost that will be supported up to the maximum capacity of an investment generating revenue. In other words, "any investor will finance a project up to the level he is willing to lose money" (Popovici-Coita, 2015:130; Popovici and Tulai, 2010). *Agents' financing decision of a project is subject to budgetary constraint* (Popovici – Coita, 2015:129).

Funding decision function of the agent is build upon the values of the indicator "profit or loss area" quantified at project level. Derivation of cost (C) versus time leads to

the velocity rate of cost ( $v_c$ ). Similarly, the velocity rate of revenue ( $v_v$ ) in the project is the derivation of revenue (V) over time (W. Gellert et al., 1980: p.503, Popovici-Coita, 2015: 111-118; Popovici et al. 2010).

*The indicator „profit or loss area” is the difference of surfaces generated by the overlapping of the two areas described by the graph of velocity of revenue and that of cost specific at project level* (Popovici-Coita, 2015:124). *This is calculated according*

*to the formula (it is considered that  $t_0=0$ ):*

$$Z_R^n(t) = \int_{t=1}^n (v_v(t) - v_c(t)) dt$$

*And, the component indicators are as follows.*

$$\int_{t=1}^n v_v(t) dt = (t_1 - 0) * V_1 + (t_2 - t_1) * V_2 + (t_3 - t_2) * V_3 + \dots + V_n(t_n - t_{n-1}) = \sum_n V_n(t_n - t_{n-1})$$

*where:  $V_n$  = represents the revenue realized along the period  $t$ ,  $t = \overline{1, n}$ .*

$$\int_{t=1}^n v_c(t) dt = (t_1 - 0) * C_1 + (t_2 - t_1) * C_2 + (t_3 - t_2) * C_3 + \dots + C_n(t_n - t_{n-1}) = \sum_n C_n(t_n - t_{n-1})$$

*where:  $C_n$  = the spending made along the period  $t = \overline{1, n}$ .*

Differentiating the above identities we get the following result:

$$Z_R^n = \sum_n (t_n - t_{n-1}) * (V_n - C_n),$$

*Firstly, the funding decision function of the agent is defined according to the formula* (Popovici-Coita, 2015:131):

$$F(Z_R, R) = \left\{ \begin{array}{l} 1 \Leftrightarrow Z_R(t) \geq 0 \wedge R(a_r, t) \in \{0;1;1,5;2;2,5;3\} \\ -1 \Leftrightarrow Z_R(t) \geq 0 \wedge R(a_r, t) \in \{3,5;4;5\} \\ 1 \Leftrightarrow Z_R(t) < 0 \wedge R(a_r, t) \in \{3,5;4;5\} \\ -1 \Leftrightarrow Z_R(t) < 0 \wedge R(a_r, t) \in \{0;1;1,5;2;2,5;3\} \end{array} \right\},$$

Secondly, a negative constraint of the disposable income of agents' decision is defined according to the following formula (Popovici – Coita, 2015:131-133):

$$Z_R(t) = V_i(t) \wedge Z_R < 0$$

This indicates the maximum negative value can be achieved by the project profitability indicator  $Z_R$  in terms of financial supportability of project expenditure from the disposable revenue of the enterprise budget for investment ( $V_i$ ).

### 3. Applications of the model in the decision making process of financing a project

In the above formula there is the indicator  $a_r$  that reflects likelihood of a financial imbalance in the equality of income and expenditure in the project's budget, at a point in time  $t$ . This indicator offers information to describe the shape of risk by providing a score for the type of risk associated (for a thoroughly explanation of  $a_r$  please see Popovici – Coita, 2015:133-134; Popovici et al., 2010). Function  $R(t)$  is used for describing risk using scores attached to the likelihood of appearance (Popovici et al., 2010).

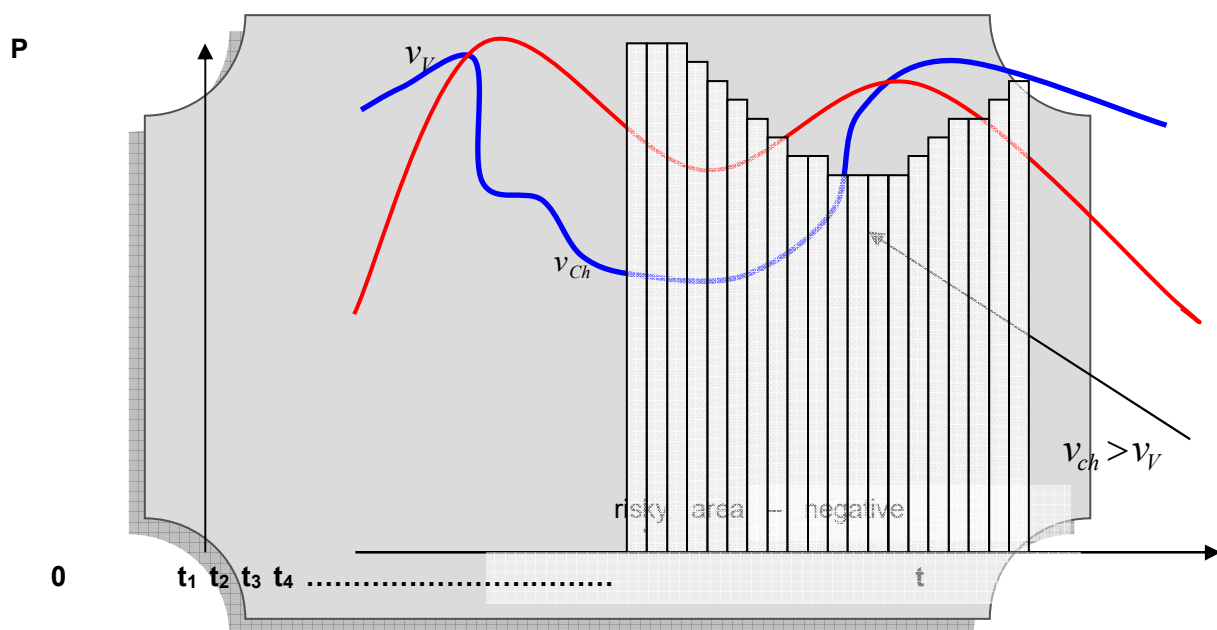


Figure 1 Negative value of the area described by the indicator  $Z_R$   
Source: Popovici-Coita I.F. (2015: 125)

Any negative value of the indicator  $Z_R$  shows the level of cost expressed by the velocity rate of spendings ( $V_{ch}$ ) exceeds the limit imposed by the velocity rate of revenue ( $V_V$ ) available for investment in the budget's company ( $V_i$ ) and creates the premises for financial imbalances at project level. This restriction acts like a channel for inducing a potential financial imbalance to the company's budget. A negative value of the indicator reflects a shortage of liquidity in the project, whose maximum limit can be up to the revenue generated from investment added to the available revenue for the project from the enterprise self-financing sources ( $V_i$ ). In this way, the risk of financial imbalance identified at the project level can lead to a financial risk for the company implementing the project through the negative influence of financial indicators due to the risk of financial imbalance at project level. This is caused by the erosion of disposable income at the company level from losses arising from a particular investment project (Popovici – Coita, 2015:133).

A positive value of this indicator ( $Z_R$ ) shows a monetary surplus of the overall balance between revenue and expenditure of the project. Therefore, a negative value indicates that there is a gap between revenue and cost so this is a warning sign to the manager that the project may generate losses that income level may not be sufficient to cover its costs. Positive values of the indicator reflects a favorable state of the project able to ensuring necessary and sufficient financial resources for a high degree of profitability of the investment. Negative values act as a signal that the risk of financial imbalance must be removed (Popovici-Coita, 2015:127).

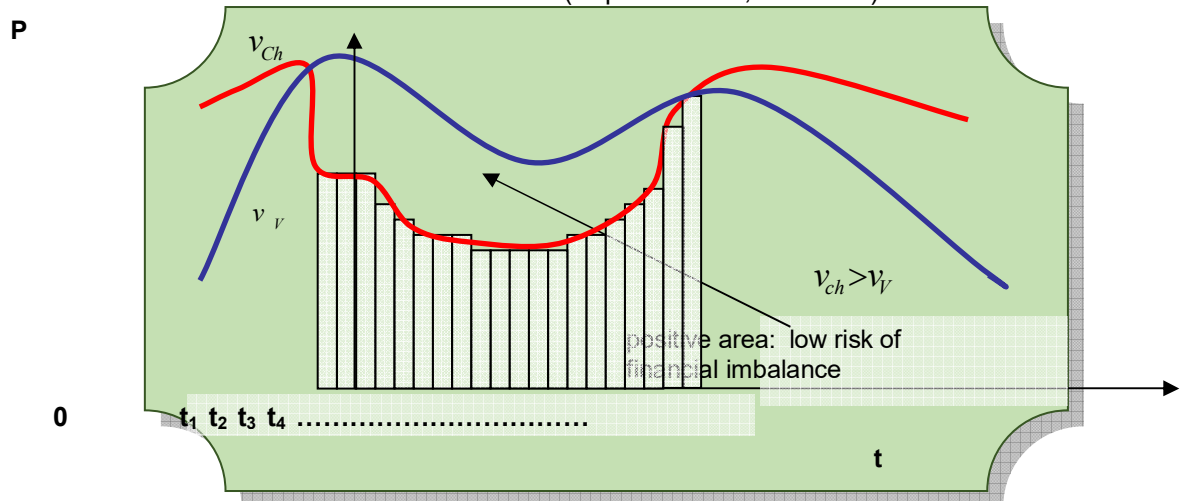


Figure 2 Positive value of the area described by the indicator  $Z_R$   
Source: Popovici-Coita I.F. (2015: 125)

If velocity of revenue and cost are used to measure and estimate the risk of financial dynamics (Popovici et al. 2010; Popovici and Tulai 2010a; 2010b), the "profit or loss area" ( $Z_R$ ) reflects a state characterizing the *global equilibrium of financial*

*imbalance at project level*. The managers' financing decision is built according to the shape of the risk of a financial imbalance in the project based on the values of the indicator  $Z_R$  (Popovici-Coita, 2015:127-128).

### Conclusions

Research limitations refer to the fact that no economic model will accurately capture all of the real phenomena because they act as theoretical abstractions used for studying different real phenomena.

Innovative elements of current research refer to defining a set of indicators for measuring financial balance at project level and consequently from a company's perspective. They are based on concepts of nonlinear dynamics, econophysics, and fractals. The indicators are used as selection criteria for decision making model of business financing mix. The agents' decision regards what type of funding will be used for project implementing according to the agents' degree of risk born, estimated through the indicators above.

Research has shown that concepts such as agent, project and goal are interconnected. The organization of human activity in general has a complex structure as a "fabric" that resembles to "Sierpinski's triangle", a geometrical fractal figure (Popovici-Coita, 2015:9). This is a geometric shape that has a fractal structure because the closer you look into it you can observe "copies" of the entire picture. In a similar way looks the structure of an organization (Mandelbrot, 1983). The company consists of projects to achieve objectives corresponding to humans, as well as individuals interconnected to each other through the network of projects.

Financing a business decision is connected to the goal, financial value and available sources of financing the project from the financial market.

The practical utility of the model consists of the fact that it sizes the possibility of financial imbalances in the project through the "profit or loss area". This is a warning sign for future financial troubles in the project budget. Analyzing this indicator, agent decides towards minimizing the losses of the project and reduces the probability of financial imbalances in the project according to his specific attitude towards risk, either appetite or aversion or a switch between them.

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# APPLIED CORPORATE VALUATION USING FCFF METHOD – THE CASE OF RABA PLC. THE ONLY COMPANY FROM THE AUTOMOTIVE INDUSTRY PRESENT IN THE HUNGARIAN STOCK EXCHANGE

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**Abstract:** *The article primarily seeks to analyze the corporate performance of one of the significant players of the Budapest Stock Exchange, Rába PLC (RABA) and to prepare its corporate valuation based on the free cash flow method. RABA is a premium share and one of the components of the BUX index, as well as the only company from the automotive industry present in the Hungarian Stock Exchange. Another reason for this study is that in 2011 the Hungarian State (Hungarian National Asset Management Inc.) acquired 74% ownership in the company, so the ownership structure was significantly changed compared to the previous period. We were interested in knowing how the change in the ownership structure had been valued by investors. Is the steady growth of share prices demonstrable? Has the performance of the company improved on the basis of annual financial statements and financial ratios compared to the period before the government acquired major stake? How did government influence affect profitability and capitalization? As a general background to the studies, we first reviewed the automotive industry's economic processes based on publicly available information. Second, we presented the most important financial features of the company's 10-year development trend. Third, based on the historical, fundamental data series of RABA, we conducted a trend analysis. We estimated the expected future free cash flow to firm data and the relevant weighted average cost of capital. When determining the equity component of the weighted average cost of capital, the capital asset pricing model was used and a systematic risk assessment was also performed. With a two-phase free cash flow model and scenario analysis, we defined a target exchange rate band that, according to our analyses and expectations, indicates the expected future exchange rate trend. Finally, we evaluated our results compared to the current market trading data.*

**Keywords:** *corporate valuation; free cash flow to firm; weighted average cost of capital.*

**JEL Classification:** G30; G31.

## 1. General industry background

We can make a general statement about the automotive industry: it is an important strategic industry, one of the most important elements of the industry-inspiring policy of the current Hungarian government. According to the public data of the Hungarian Central Statistical Office, the volume of vehicle production more than doubled in the period of 2010–2015, from HUF 3610 bn to HUF 7833 bn. The rate of increase is continuous, with respect to its share from total industrial production, as well.

One of the reasons for growth may be the economic policy of the current government, but in addition major automotive industry players can also decide to increase their production capacity independently or due to parent company incentives. While at the end of 2010, the output of the automotive industry represented only one sixth of the industrial production, by the end of 2015, the automotive industry volume exceeded one quarter of the industrial output (Table 1). Given the growing trend in total industrial production, it can certainly be stated that the automotive industry is producing a stronger growth rate than other sectors, which confirms the government's incentive efforts relating to the automotive industry.

It is also worth mentioning the change in sales. Although domestic and export sales tend to increase, the volume of export sales is considerable higher. The sales volume of the produced assets is only about 5–10% of the domestic sales volume. Domestic sales increased from HUF 300 bn to 618 bn in the period under review, while the value of exports increased from HUF 3300 bn to 7200 bn (Table 1). These data properly reflect the export orientation of the automotive industry and the volume, high standard and advanced state of its foreign market.

As a result of large investments realized from foreign direct investments, the development of vehicle manufacturing has been outstanding in recent years and it has been the industry's largest sector since 2011. Alongside the gradual introduction of new capacities, vehicle production in 2015 was 17% higher than in the previous year and more than double than that of 2010. Since 2010, the subsector has performed better than the manufacturing average every year.

**Table 1:** The Hungarian automotive industry in the 2010–2015 period

Year	Automotive industry production	% of industrial production	Domestic sales	Export	Total sales	Industrial production*
2010	3 610 240	17.64%	305 037	3 289 294	3 594 331	20 462 351
2011	4 100 546	18.10%	317 191	3 751 751	4 068 942	22 654 708
2012	4 448 366	19.22%	288 121	4 150 567	4 438 688	23 141 018
2013	5 401 375	22.91%	352 558	5 021 424	5 373 982	23 575 766
2014	6 659 071	25.98%	454 165	6 197 391	6 651 556	25 635 324
2015	7 833 303	28.61%	618 863	7 187 255	7 806 118	27 377 873

Source: Hungarian Central Statistical Office, 2016 (data in million HUF)

It is also an important feature that more than nine percent of the automotive production is divided by large companies. 92% of sales are realized on foreign markets, and consequently external demand determines the trend of production. The dynamic growth experienced in 2015, as in previous years, was primarily due to a 16% increase in external demand. Among the two major subsectors of vehicle manufacturing, the major subsector of road vehicle production increased by 17% in 2015, and the minor subsector of road vehicle components production increased by 20% compared to the previous year. The two subsectors together account for 97% of vehicle production in Hungary (HCSO, 2016).

Road vehicle production is almost entirely concentrated in 4 large companies, and when considering the whole subsector, companies having at least 250 employees have a share of production over 90% (Lepsényi, 2014).

## 2. Methodology and literature review

The article seeks to perform the corporate valuation of the premium share traded on the Budapest Stock Exchange, RABA PLC, based on the discounted cash flow method (Berk et al, 2015, p. 328). RABA is the only vehicle industry player in the Hungarian stock exchange, its main activity is production of automobiles and components. The company does not pay dividends, therefore the free cash flow to firm (FCFF) model was chosen as an analytical tool of the DCF models (Kiss, 2015; Becsky-Nagy – Droppa, 2015). In this model, free cash flow is the amount of money produced by the company's activities that is available to the providers of the company's resources (lenders and equity holders). The discount rate should reflect the alternative cost of each of the providers of the company's resources, in proportion to their contribution to all sources, according to the concept of weighted average cost of capital (WACC) (Copeland et al., 1999; Damodaran, 2006, p. 28). Based on the growth trend of the company's past FCFF data series and on future estimates, we have considered the use of the biphasic model as realistic. The estimated value was divided into two components: the present value of the cash flows during the explicit forecast period (5 years: 2017–2021) and the present value of the cash flows after the explicit forecast period (Copeland et al., 1999, p. 170; Berk et al, 2015, p. 329; Damodaran, 2006, p. 28). We used scenario analysis in order to realize the theoretical determination of the exchange rate band, for the growth rate relating to the residual value (Damodaran, 2012).

To substantiate our analyses, we examined the time series data of RABA's sales revenue, total assets and post-tax profit for the period 2006–2016. Thus, we were able to evaluate the basic data of the period before and after the economic crisis. Subsequently, we discussed the analysis of profitability indicators. We have investigated whether the return on sales (ROS), return on assets (ROA) and return on equity (ROE) data series show a change after the transformation of the ownership structure in 2011. The relevance of using profitability indicators was verified by the studies of Bodie et al (2005), Stankeviciene (2012), Rózsa (2014), Fenyves et al (2014) and Droj (2015).

The data of RABA PLC's annual report have been downloaded from government official annual reports' portal *e-beszamolo.im.gov.hu* with respect to the period of 2006–2016. We used a more detailed data series for the analysis of past FCFF data series with respect to the period of 2001–2016. We used the balance sheet, profit and loss account and supplemental notes to the financial statements for the analyses. In order to prepare the tests, calculations, and forecasts, the data was imported into Microsoft Excel spreadsheet software program. In support of the analyses, quarterly flash reports on the Budapest Stock Exchange website and other statements have also been used.

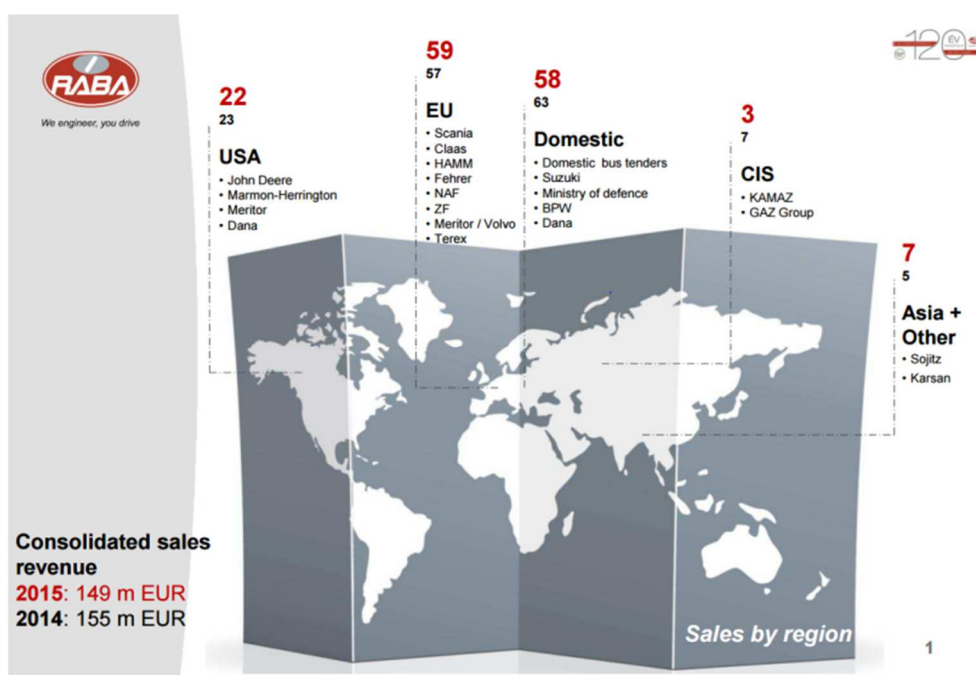
We also used *bet.hu* in order to download share prices and calculate seasonal yields. In order to calculate the WACC, it was also necessary to estimate the systematic risk, for which we have used the methodology of Bodie et al (2005): we have created logarithmic yields within annual intervals, using the daily exchange rate data, and then the covariance with the appropriate yields of the BUX index was determined.

Finally, the covariance data was divided by the variance of the market portfolio, so we obtained the annual systematic risk (beta factor) values.

### 3. Results of the research

#### 3.1. Valuation of RABA PLC's corporate performance

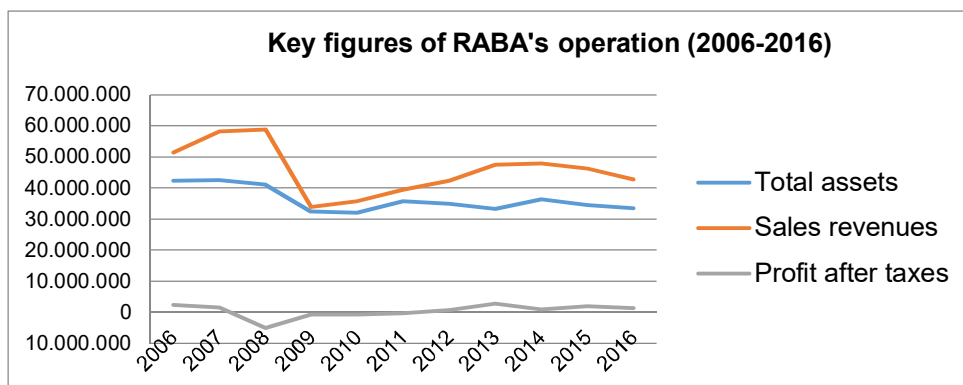
The company employs nearly 2,000 people and is headquartered in Győr. The Holding's business consists of 3 business lines (axles, vehicle components and vehicles), with a share of the total sales revenue of 49%, 27%, and 24% respectively, based on the information published on the company's website. The Holding is a public limited company, which has been listed on the Budapest Stock Exchange since 1997. In recent years, RABA's turnover exceeded HUF 46 billion (i.e. EUR 148 million), and the most important sales areas are the followings, by the order of volume: EU, domestic, US, Asia (Figure 1).



**Figure 1.** Sales structure of Raba Holding  
Source: the Company's website, [www.raba.hu](http://www.raba.hu)

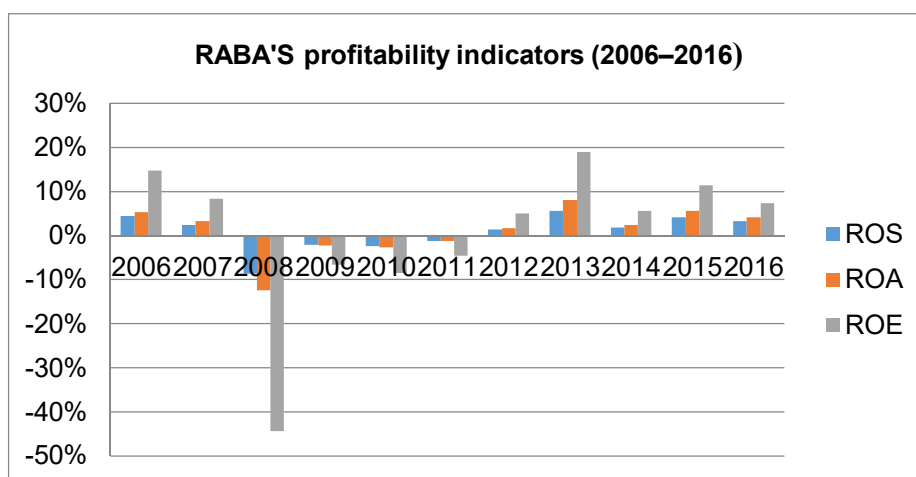
In 2011, the Hungarian State (Hungarian National Asset Management Inc.) acquired 74% ownership in the company, so the ownership structure was significantly changed compared to the previous period. It is worthwhile examining the main financial features of the company before and after the change of ownership (Figure 1). As shown in Figure 1, RABA's sales exceeded HUF 30 billion, over the entire period. A setback in sales turns out in 2009, its reasons can be found out in the quarterly report for the IV quarter 2009. The main reason for the decrease was the sudden decline in US sales volume: in 2008: USD 108.5 million, in 2009: USD 42.4

million, representing a decrease of 61%. The EU market also experienced a significant decrease: from HUF 12.6 bn in 2008 to HUF 6.2 bn in 2009. After the crisis, the revenue got back to normal, there is a rising trend, but the HUF 50 billion level cannot yet be exceeded for the present. There was a significant decrease in the asset portfolio during the period of 2006–2009. On the one hand, this is due to the post-crisis loss. On the other hand, it can be explained by the restructuring of the credit structure. At the same time, it can be stated that in 2010 the book value of total assets and total liabilities stagnates between HUF 32–37 billion, despite the fact that the ratio of long-term loans is continuously decreasing according to the annual reports.



**Figure 1.** Key figures of RABA's operation (2006–2016) (data in thousand HUF)  
Source: Private processing of the reports relating to the period under review (2017)

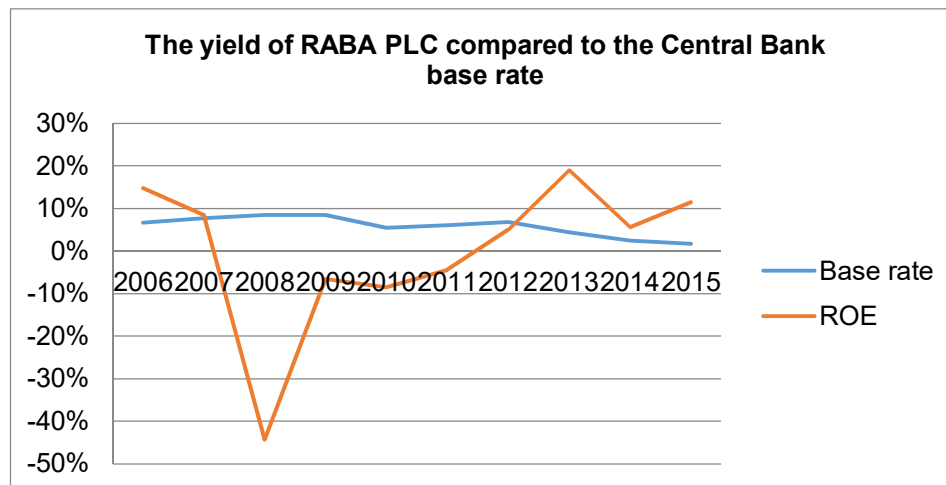
From the change in profits after taxes, it can be concluded that after the state's acquisition of shares in 2011, the company generated profits each year, which is explained by the balanced operating cost level alongside rising sales revenue and by the constantly declining financial expenditures. The decline in financial expenditures comes from the new credit policy. The balance sheet shows that the stock interest-bearing liabilities have been restructured. Under the new structure, the term of loans became longer, with a more favorable annual interest payment obligation, and the value of short-term interest-bearing liabilities significantly decreased. After the restructuring of the ownership structure, the favorable profit level justifies the analysis of the profitability rates in more detail (Figure 2).



**Figure 2.** RABA'S profitability indicators (2006–2016)

Source: Private processing of the annual reports relating to the period under review (2017)

On the basis of the supplementary annexes and profit and loss accounts of the period, the recession caused by the crisis and the high expenditures of financial transactions have played a decisive role in the unfavorable change in profitability data during 2008–2011. After the government acquired major stake in the company, the above mentioned restructuring of the credit structure resulted in a positive outcome: fewer financial expenditures had to be attributed to the operating profit. Thus, the company was able to generate yields that were consistent with the profitability rates at the steadily increasing profit level. Based on the data obtained from the end of the year flash reports of 2016, RABA generated an equity pro rata income of 7.4%, which is considered relatively high in the current investment environment. This is supported by Figure 3.



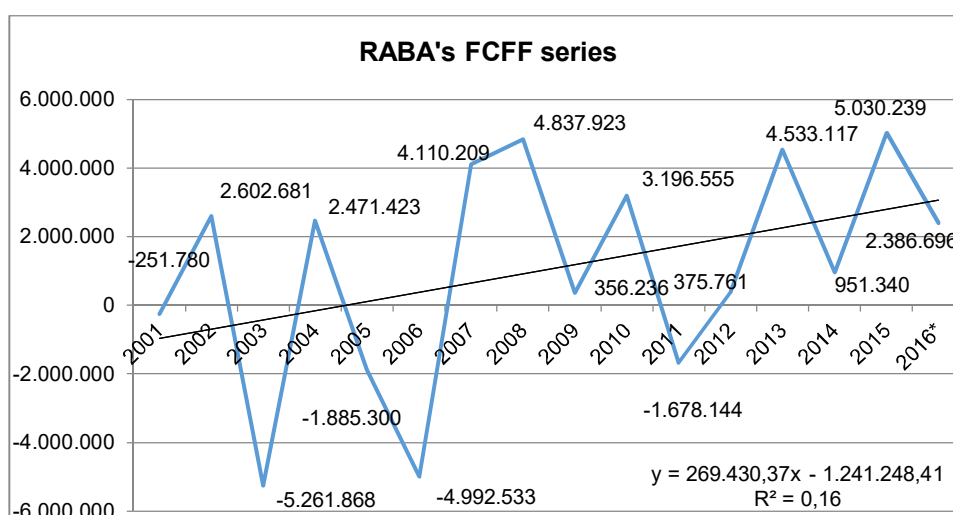
**Figure 3.** The yield of RABA PLC compared to the Central Bank base rate

### 3.2. Applied corporate valuation of RABA using FCFF method

As explained in the methodology chapter, RABA's corporate valuation is calculated as the sum of the discounted present value of estimated free cash flows to firm that are expected in the future. From the FCFF data of the past period (2001–2016), based on the trend-adjusted growth, we have prepared a forecast for the next 5 years and then we assume a slower growth phase starting from 2021. For the definition of past FCFF data, the formula of Berk et al (2015) has been used.

$$FCFF = EBIT \times (1 - \text{Tax rate}) + \text{Depreciation} - \text{Capital Expenditures} - \text{Increases in Net Working Capital}$$

EBIT as operating profit was included in the reports with the appropriate financial content. According to the rules of corporation taxation, for an EBIT under HUF 500 million 10% tax, for an EBIT above that amount 19% tax is calculated. The increase in fixed assets is the difference between the value of the invested asset of the current year and that of the previous year. The increase in working capital requirement, i.e. the value of increases in net working capital is determined as a year-on-year change in the difference between current assets and non-interest-bearing liabilities.



**Figure 4. RABA's FCFF series during 2001–2006 (data in thousand HUF)**

Source: Private processing of the annual reports (2017)

Figure 4 illustrates the FCF series of recent years (2001 - 2016). A trend function can be added to the data, which can be used to predict the expected free cash flow series for the coming years. It can be seen that the past FCFF series reached the bottom in 2003, in 2006 and in 2011 there was also a significant decrease compared to the previous periods. In all three cases, there is a common explanation for low values: the starting-point, the profit before interest and tax payments were extremely low and the growth in working capital further reduced these values.

Using the equation of the trend line ( $y = 269\,430.37x - 1\,241\,248.41$ ), we estimated the FCFF values for the next 5 years (Table 2).

**Table 2:** RABA's estimated firm cash flows for the next 5 years (data in thousand HUF)

Years	2017	2018	2019	2020	2021
FCFF	3 339 068	3 608 498	3 877 929	4 147 359	4 416 789

Source: Private estimate (2017)

To estimate the value of the company, we use a two-phase discounted FCFF model based on Damodaran (2006) and Damodaran (2012). The first part is the discounted present value of FCFF values for the next 5 years using WACC. The second part is the discounted value of the estimated residual value of the 5th year (the present value of the FCFF series from the 6th year to the infinite period by theory) based on the following relation.

$$V = \sum_{t=1}^5 \frac{FCF_t}{(1+WACC)^t} + \frac{(FCF_5 * (1+g))}{(WACC_k - g) * (1+WACC)^5}$$

### 3.2.1. Definition of the WACC

According to Damodaran (2012), the appropriate discount rate is the weighted average cost of capital for the company's free cash flow valuation. WACC calculation method:

$$WACC = re \frac{E}{V} + rd (1 - T) \frac{D}{V}$$

We have used a 10% key for determining the value of  $T$ , the corporate tax rate. This is a simplification, but we have verified that it has practically no distorting effect. The CAPM model was used to determine the  $re$ , i.e. the expected return of equity (Bodie et al, 2005).

$$re = rf + \beta * (rm - rf)$$

The value of  $rf$ , i.e. the risk-free interest rate was estimated by the average annual Central Bank base rate. To calculate  $\beta$ , the systemic risk factor, we needed the variance of the yield on the market portfolio and the covariance between the yields of RABA and of the market portfolio. We selected BUX index as a market portfolio. The following relation was used for determining  $\beta$ .

$$\beta_i = \frac{COV(r_i, r_m)}{\sigma_m^2}$$

The covariance between the yields of RABA and of the market portfolio was determined on the basis of the annual logarithmic yields calculated from the daily closing rates of the BUX index and of the RABA shares, using the covariance function of Microsoft Excel, in the 2006–2016 period, for each year. The variance of

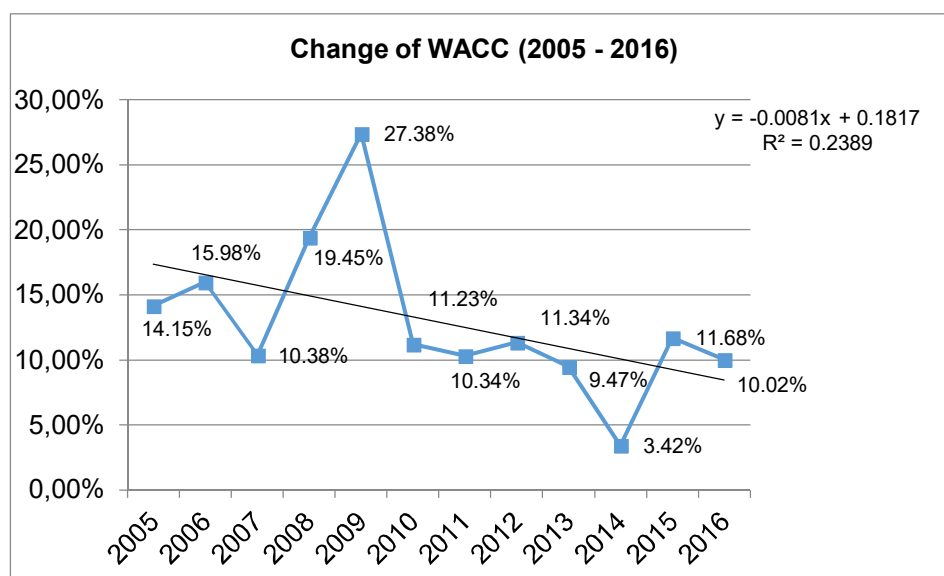


the yield of the market portfolio (BUX index) was also determined using the logarithmic yields.

The  $rm-rf$  value, i.e. the risk premium of the market portfolio was calculated from the difference between the average annual yield of the BUX index and the average value of the risk-free rate.

In order to discount FCFF values at the appropriate rate, a trend has also been added to the WACC values. Using the trend function, the appropriate WACC discount rates were determined for the 5 year of phase 1, then we assumed a constant WACC value, increased by a risk premium, for phase 2, for the period after 2021.

**Figure 5.** Illustrates the change of WACC values.



**Figure 5.** WACC values and their trend in the 2005 - 2016 period

Source: Private estimates (2017)

Figure 5 shows that data volatility is low, with the exception of the data for 2009 and 2014. The 2 breakouts are due to the fluctuation of the BUX index. While in 2009, during the crisis, a 73% rise in prices and a remarkable yield increase was created, in 2004 a decline of 10.94% was characteristic and these values had a strong influence on the expected return on equity and thus on the capital cost, with average beta values (0.44 and 0.48). The future expected WACC values generated by the trend function were very close to the average WACC value of the examined period. Therefore, we decided to apply the average WACC value (12.9%) as a discount rate for phase 1. In phase 2, a WACC increased by risk premium (13.9%) was used to compensate for the increasing risk of the forecast.

### 3.2.2. Structure of the two-phase FCFF model

The following table shows the discounted values of the estimated FCFF values for phase 1 according to the average WACC of 12.9% (Table 3). It can be seen from the table that the average WACC discount of the FCFF values determined by the trend calculation results in a value of HUF 13.4 billion for the present value of phase 1.

**Table 3:** Present values relating to phase 1 of RABA's estimated FCFF series

Data: in thousand HUF	2017	2018	2019	2020	2021
<b>FCFF</b>	3 339 068	3 608 498	3 877 929	4 147 359	4 416 789
<b>PV (FCFF)</b>	2 957 454	2 830 818	2 694 499	2 552 364	2 407 522

Source: Private estimates (2017)

In phase 2 a lower, stable FCFF growth rate will be characteristic and we will discount based on a higher  $WACC_k$  (13.9%). The residual value is determined according to the following formula.

$$\frac{(FCF_5 * (1 + g))}{\frac{(WACC_k - g)}{(1 + WACC)^5}}$$

$FCF_5$  is the FCFF estimated for 2021. A scenario analysis is prepared for growth rate  $g$ . Residual values are estimated in optimistic, normal and pessimistic cases as well. The discount rate applied in phase 2 is  $WACC_k$  (13.9%).

Based on the following table, we determine the growth rate  $g$  chosen for the 3 different scenarios (Table 4). The equation of the used trend line is as shown in Figure 5:

$$y = 269\,430.37x - 1\,241\,248.41$$

**Table 4:** Expected FCFF values based on the trend function

FCFF data: in thousand HUF	FCFF	Increase
<b>2017</b>	3 339 068	8.78%
<b>2018</b>	3 608 498	8.07%
<b>2019</b>	3 877 929	7.47%
<b>2020</b>	4 147 359	6.95%
<b>2021</b>	4 416 789	6.50%
<b>2022</b>	4 686 220	6.10%
<b>2023</b>	4 955 650	5.75%
<b>2024</b>	5 225 080	5.44%
<b>2025</b>	5 494 511	5.16%
<b>2026</b>	5 763 941	4.90%

Source: Private estimates (2017)

The table shows that the optimistic average growth for the distant future is 5%, while the realistic growth is 4%, and the pessimistic estimate is an increase of 3%. The final results relating to the evaluation of Phase 2 in the different cases are detailed in the following table (Table 5).

**Table 5:** Estimated value of the company (RABA PLC)

<b>Data: in thousand HUF</b>	<b>Optimistic</b>	<b>Realistic</b>	<b>Pessimistic</b>
<b>Growth rate</b>	5%	4%	3%
<b>Residual value</b>	28 392 301	25 282 296	22 742 753
<b>The value of the Company</b>	<b>41 834 958</b>	<b>38 724 953</b>	<b>36 185 410</b>

Source: Private estimates (2017)

Table 5 shows that based on our estimates, the value of a company can range from HUF 36 billion to HUF 42 billion, and that is significantly more than the total value of assets in the balance sheet of 2016, which is HUF 33.5 billion. We have to admit that the value of a company is not only composed of the total value of its assets in the balance sheet, but it is also important to take into account whether the sustainability of the company's business, the future estimates and the development opportunities are a reason for positive judgment and favorable expectations.

Since the value of a company is higher than the book value of all assets on the basis of our estimates, the reasons for the difference between the book value and the estimated value must be examined. The company's market value is estimated by Jägle (1999) as a combination of current performance and future forecasts. The higher value of the future projections, i.e. the Present Value of Growth Opportunity (PVGO) indicates that based on the tendencies, the company is operating in a strong position, and it is in a safe and sustainable situation that can justify that the estimated market value is above the book value. The fact that the FCFF currents have been estimated based on the trend for the values of the last 16 years, also has a strong impact on our estimates. The fact that the present value for the 5th year of phase 1 covers almost one-third of the company's asset value, projects a very positive future for the company.

#### 4. Conclusions, proposals

The main purpose of our study was to estimate the value of the Hungarian automotive stock exchange company, RABA PLC (RABA), by the use of a free cash flow model. As a background of our financial research, we have presented the main characteristics of the automotive industry and analyzed the most important financial data of RABA's past 10-year performance, with regard to the 2011 ownership structure change (74% majority state ownership).

In order to carry out the applied corporate valuation, we selected the two-phase FCFF model for which detailed historical analyzes were made. We have added a trend function to the past FCFF data and used this to estimate the expected free cash flow for the next 5 years. Detailed analyzes were also carried out in order to determine the relevant data of the weighted average cost of capital. The most important element of this study was the use of capital market and Hungarian stock

exchange data. With the yields of RABA shares, the yields of the BUX index, the covariance and variance data, and the estimation of the risk-free rate, a well-funded discount rate analysis was prepared. In case of growth rates applicable in phase 2, a scenario analysis was made, so the estimation of the value of the company resulted in one interval.

The result of the discounted FCFF estimate is that the company's estimated market value is between HUF 36 and 42 bn, depending on the growth rate of phase 2. This estimated corporate value allows us to determine the target price of RABA shares. The values necessary for the calculation are shown in the following table (Table 6).

**Table 6:** Determination of the target price band for RABA shares

FCF growth rate	Estimated corporate value (data in thousand HUF)	Value of liabilities in 2016 (data in thousand HUF)	Estimated market value of equity (data in thousand HUF)	Number of shares	Theoretical exchange rate of 1 share (HUF)
5%	41 834 957	14 835 874	26 999 084	13 473 446	<b>2 004</b>
4%	38 724 952	14 835 874	23 889 079	13 473 446	<b>1 773</b>
3%	36 185 409	14 835 874	21 349 536	13 473 446	<b>1 584</b>

Source: Private estimates (2017)

The estimated market value of RABA's own equity can be calculated by deducting the liabilities from the estimated corporate values. The estimated market value of equity is between HUF 21.3 and 27 bn. If the equity value is divided by the number of shares traded (in circulation), the theoretical target price band of 1 share can be calculated, which is in this case between HUF 1584 and 2004. At the moment the market rate (March 29, 2016) is HUF 1175, compared to a significantly higher target price, according to our valuation.

Since the change in the ownership structure, RABA has been profitable in recent years, it has a secure market position, and it is characterized by continuously decreasing financial expenditures and a decreasing long-term debt volume. All of these support that in the long run it would be reasonable for the share price to rise, the share may be proposed to be hold for the long term. The state ownership and the degree of trading give confidence for a long-term holding period. The share itself is considered less speculative, traded on a one-year average, in a value of HUF 3.9 million per day.

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## ECONOMETRIC MODELS OF BANKING PERFORMANCE

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**Abstract:** *The financial crisis generated by non-performing loans and the housing credit crisis have caused chaos on financial markets with negative consequences on the world economy. The strong growth of the US economy until September 2001 has gradually generated skepticism among financial analysts about the evolution of the world economy and has come true with the terrorist attack of September 2001. Against the backdrop of the slowdown in the US economy and especially the lack of regulation in the field, the Federal Reserve's futures contracts and the unprecedented reduction in the Fed policy interest rate, the US economy and the world economy have returned to normal growth rates, notably due to the expansion of real estate loans, and on the backdrop of higher ratings granted to investment banks by rating agencies. Thus, in 2007, the indebtedness of the US population was 2.5 times higher than earnings. The situation continued until the largest investment bank in the world, Leman Brothers, called for bankruptcy and generated a domino effect on the entire international financial system. That is why in this paper we analyze the important aspects of banking performance in Romania and Europe. Based on the ratio method, we tried to show how the financial crisis has had a negative impact on the performance of these banks. Thus we analyze the evolution of income, expenses, assets and the ratio performance in a chosen group of banks.*

**Keywords:** *crisis; risks; ROA; ROE.*

**JEL Classification:** G21; G31.

### 1. Introduction

Nowadays, the financial crisis that started the world banking crisis is a phenomenon which has to be evaluated all the time. Banking performance implies a complex of events with adverse consequences for banks and events which can generate unfavorable influences for the banks' stability. In our paper, we analyze the evolution of banks in the period 2005-2015. Performance bank analysis loses its meaning when there is a case of non-performance as a result of inefficient management policies. If performance is based on a system of indicators, in the case of non-performance, it is relatively easy to detect the causes from the balance sheet and from the income statement of a bank. Thus, a high proportion of short-term assets, unbalanced distribution of investments in the portfolio, a large share of fixed assets in total assets, the level of provisions, a low volume of the equity comparing with the liabilities, all of these are visible signs of a higher exposure to risk of a bank and of an inadequate management of assets and liabilities. Performance management

assessed through indicators requires rules or standards of comparison in the banking system. In this respect, we analyze the trends of the bank ratios performance. Moreover, we compare banks pertaining to the same market, taking into consideration the same period of time.

## 2. Literature review

According to literature, the risk is considered to be the likelihood or the probability of losses that will not yield the expected profit in certain transactions. Thus, the phenomenon of credit risk that occurs as a result of banking operations may cause adverse effects and may affect the functionality of the banking institution: damage the quality of the business; decrease the profit, generate losses. In a recent study, Berrios and Myrna (2013:105-118) analyzed the relationship between credit risk, profitability and liquidity and have concluded that there is a negative relationship between bank deposits and cash flow banks. On the other hand, an excessive prudence causes a reduced performance of the financial institution. The main findings of another study indicate that commercial banks in Lithuania have been affected by different factors during 2008–2012, as well as the Scandinavian capital commercial banks. The conclusions and recommendations indicated that banking boards should improve their competitiveness and financial results in order to make appropriate decisions (Vidzbelyte, et al, 2013). In the same time, Simbierowicz and Rauch (2014:242–256), in a research undertaken for a period between 1998 and 2010 on a sample of commercial banks in the US, have analyzed the relationship between two major sources of risk, namely credit risk and liquidity risk and to what extent this link can measure the probability of bank failure. The two researchers concluded that the two sources of risk directly influence the probability of failure of US banks.

Using data from 1996 to 2000, other researchers analyzed the effects of ownership on bank efficiency for eleven transition countries in an unbalanced panel consisting of 225 banks and 856 observations and concluded that privatization by itself is not sufficient to increase bank efficiency as government-owned banks are not significantly less efficient than domestic private banks (Bonin, et al, 2005:31–53). Taking into account the financial crisis, other specialists show that two important causes of the current financial crisis may be the absence of regulation in the banking (financial) system of the United States and the decrease in the FED reference interest after the 2001 terrorist attack, which could have created liquidity in the banking system and protect numerous financial institutions entering default (Bătrâncea, et al, 2009:58-64). Also, Berger and Bouwman (2013:146–176) explain that the recent financial crisis raises fundamental issues about the role of bank equity capital, particularly from the standpoint of bank survival. Not surprisingly, public outcries for more bank capital tend to be greater after financial crises, and post-crisis reform proposals tend to focus on how capital regulation should adapt to prevent future crises. Therefore, in their paper researchers empirically examine how capital affects a bank's performance (survival and market share) and how this effect varies across banking crises, market crises, and normal times that occurred in the US over the past quarter century. They conclude that capital helps small banks to increase their probability of survival and market share at all times (during banking crises, market crises, and normal times) and that capital enhances the performance of medium and large banks primarily during banking crises.

Bankruptcy prediction models are generally known as modalities of identifying the "dangers" of financial entities. In financial theory there are three types of assessment addressing the financial issues, namely univariate analysis, multivariate analysis and logit analysis (Bătrâncea, et al, 2013:18-30).

One study (Boussaada and Karmani, 2015:189-202) analyzes the impact of ownership concentration on MENA banking performance over the period 2004-2011. The sample includes 38 commercial banks belonging to ten countries of the MENA region. They used an econometric method that addresses endogeneity problems that have arisen in the corporate governance literature. According to its results, ownership concentration generates performance differences in MENA banks. Namely, banking performance is linked to the identity of the large shareholder: performance is higher when the larger shareholder is a foreign investor. The study also reports a negative relationship between state ownership and bank performance. Other theories claim that the main cause of banking risks is represented by macroeconomic factors, whose changes are difficult to predict. The most common cause of financial losses and insolvency is the difficulty to cope with events that may occur but cannot be predicted.

In the same time, bank liquidity is necessary for banks to compensate the expected and unexpected balance sheet fluctuations and to provide funds necessary for development. Liquidity represents the capacity of a bank to cope efficiently with the withdrawal of deposits and the maturity of other debts and to cover the necessary of additional financing for the credits and investments portfolio (Bătrâncea, et al, 2008:111-123).

Based on pre-crisis U.S. commercial bank data, one study (Casu, et al, 2013:1617–1658) makes use of a propensity score matching approach to find out if individual banks managed to increase performance via securitization. The results report that securitizing banks turn out to be more profitable, but also face a higher credit risk and higher funding costs. In addition, these banks acquire substantial and less diversified loan portfolios, register low liquidity and capital levels. Nevertheless, results do not confirm the hypothesis.

In their paper, Behery and Eldomiaty (2010:120 – 150) analyze the relationship between the relatively strong banking industries and the values of stakeholder systems. They compare international successful stock markets systems such as the US and the UK with successful stakeholder systems such as Japan, Germany, and most of continental Europe.

Using a sample of 50 largest Chinese banks during the period of 2003–2010, others researchers analyze the impact of a comprehensive set of board characteristics on bank performance and bank asset quality in China. They report that the number of board meetings have positive impacts on both bank performance and asset quality, while board size has a significantly negative impact on bank performance (Liang, et al, 2013:2953–2968).

Many researchers tried to understand if some banks are prone to perform poorly during crises. Thus, some authors show that a bank's stock return performance during the 1998 crisis predicts its stock return performance and probability of failure during the recent financial crisis (Fahlenbrach, et al, 2012:2139–2185). Other paper examines the effect of corporate governance denoted by board size, duality, agency cost etc. on the performance of selected 24 GCC banks based on the criteria of total assets for the financial year 2012-13. Tobin's Q and Return on Total Assets (ROTA) are adopted as a measurement of accounting and financial performance

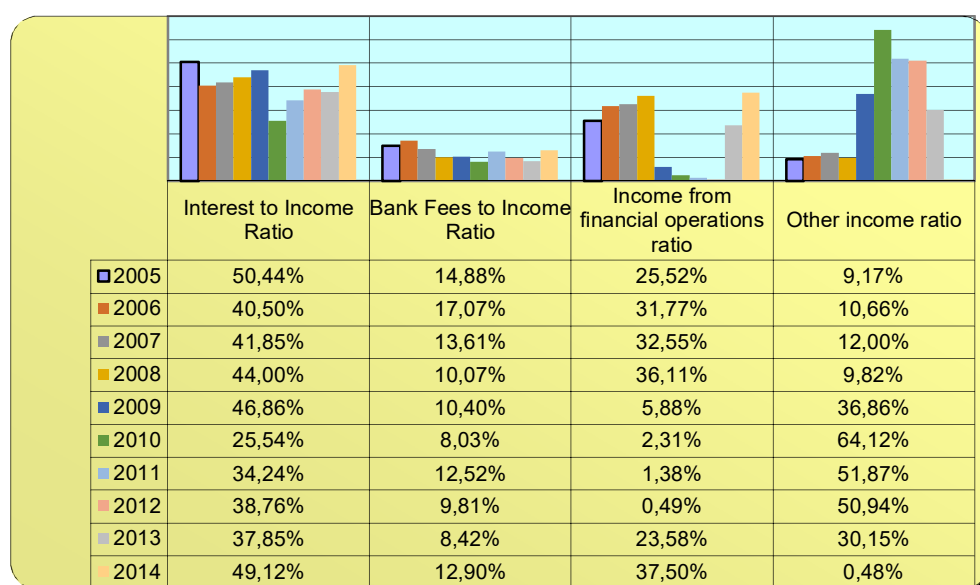


respectively. The results indicate that smaller boards are more capable of monitoring management closely in GCC banking sector (Naushad and Malik, 2015: 226-234). The effects of focus versus diversification on bank performance using data on Chinese banks during the 1996–2006 is investigated in another paper. This analysis may provide important implications for bank managers and regulators in China, as well as in other emerging economies (Berger, et al, 2010:1417–1435). Other authors estimate a model of productivity indicator for Japanese banks which recognizes that banks produce deposits in the first stage of production using inputs such as labor, physical capital, and equity capital. In the second stage, these entities use such deposits to generate a portfolio of loans and securities investments (Fukuyama and Weber, 2015). One of the major problems for researchers is to measure banking system performance. Performance management requires a thorough weighing from managers regarding the necessary compromises to be made between growth, risk and return.

## 2. Method and Results

Our research methodology is based on the ratios method, which is used banking market analysis. Comparison analysis is also employed, because it allows to establish the causes which are at the base of the world banking crisis.

The first aspect of performance banks analysis banks is the evolution of revenue structure, which is presented below.

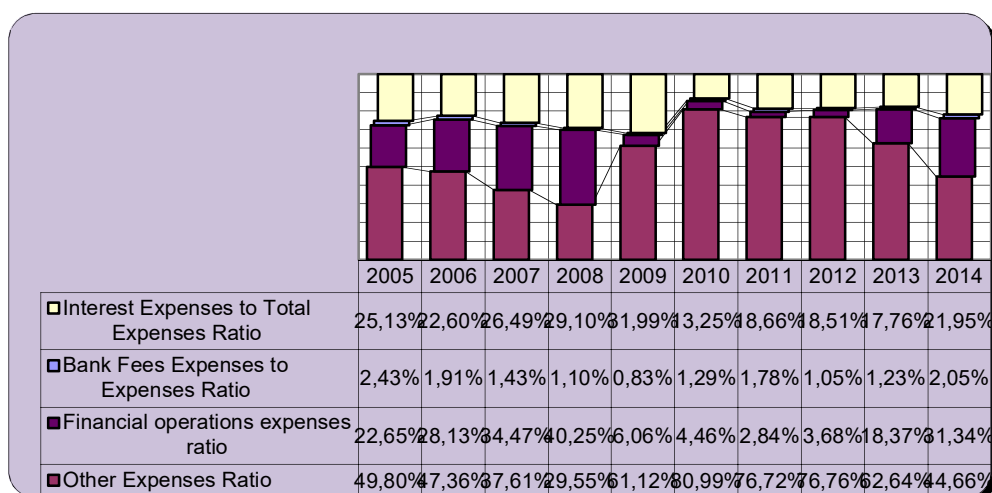


**Chart 1: The evolution of the income structure ratios**

Source: Own calculus based on income statement

From the chart above, it can be stated that the influence of the financial crisis on the bank income structure has varied. Thus, interest revenues, bank fees and operating income decreased during the financial crisis, while other income increased in the same period.

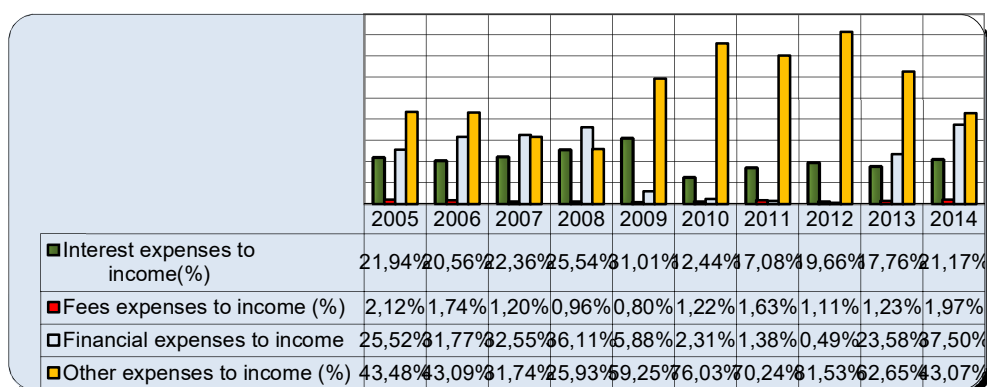
In our paper, we also have to analyze the evolution of the expenses, which are strongly connected with the banking performance.



**Chart 2: The evolution of the expenses structure ratios**

Source: authors' calculus based on the financial statements

As it can be seen from chart 2, the interest expenses and other expenses increased during the financial crisis, while bank fees and financial operations expenses decreased in the same time. This means that the banks took important decisions to cut the major classes of expenses and to compensate the income decreased. In the ratios performance system, we take into consideration the efficiency of the use of funds such as interest expenses, fees expenses, financial expenses and other expenses for the bank income.



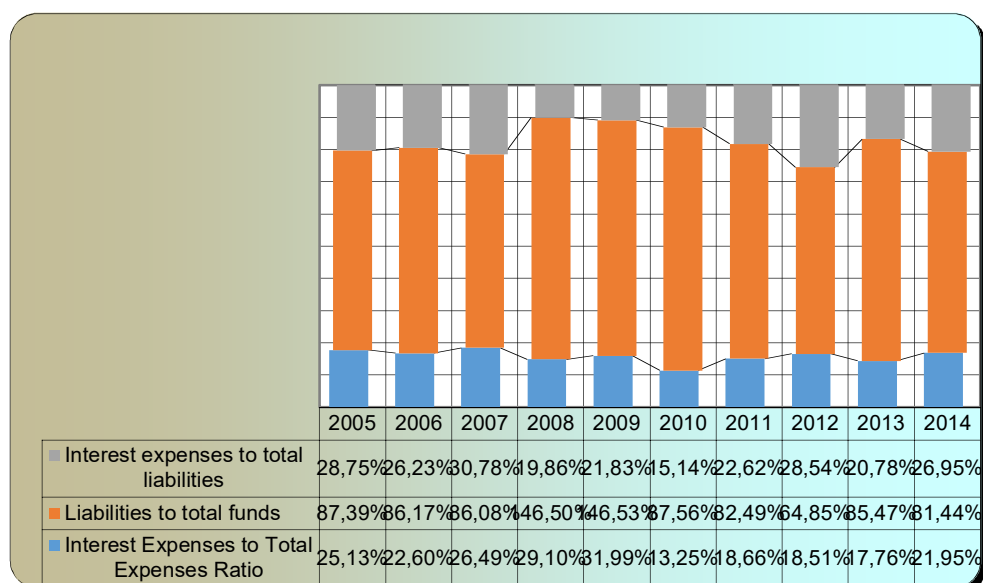
**Chart 3: The evolution of the expenses to income ratios**

Source: authors' calculus based on the financial statements

During the analyzed period, we observed that, in the crisis era, these expenses dropped with the exception of other expenses. Looking at the different types of income and comparing them with expenses ratios, we observed that expenses

decreased much more than income as a result of bankers' decisions to prevent the institutions bankruptcy.

In the performance ratio system, we also included the ratios based on efficiency of funds consumption, such as: interest expenses to liabilities, liabilities in total funds, interest expenses in total expenses.

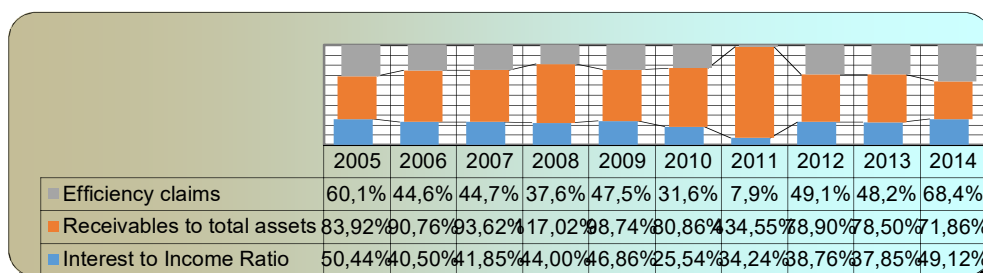


**Chart 4: The evolution of different types of expenses in total funds ratios**

Source: authors' calculus based on the financial statements

The above chart shows that interest expenses in total liabilities decreased during the financial crisis, but subsequently this ratio increased in 2011 – 2014. In the same time, liabilities in total funds increased all over the period, which means that the bankers decided to borrow from the financial markets. Also we observed that interest expenses in total expenses decreased during the crises, then increased to the same level as during the pre-crisis period.

In the banking decision making process, an important aspect is represented by assets efficiency, which is measured with the ratios such as: efficiency claims, receivables to assets and interest to income ratios.

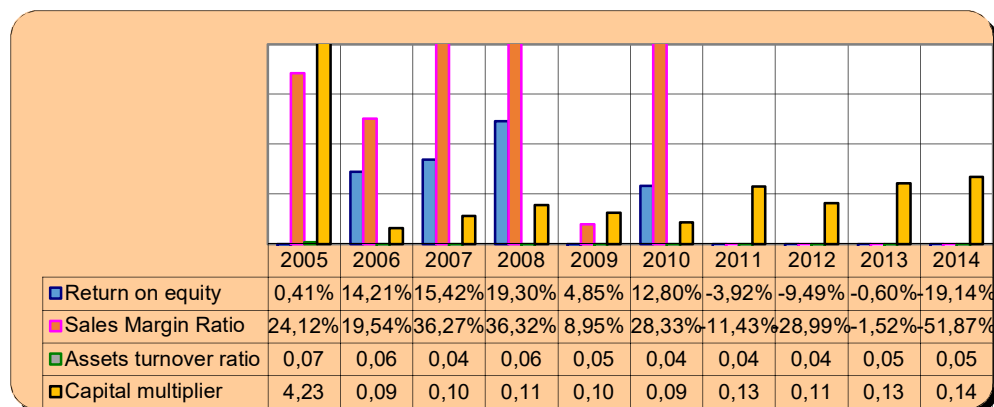


**Chart 5: The evolution of assets efficiency ratios**

Source: authors' calculus based on the financial statements

Watching the evolution of the indicators, we see that efficiency claims has the same evolution as bank assets, while receivables to assets dramatically increased especially at the beginning of the crisis. In the same time, interest to income ratio is constant at 40%. These mean that the banks increased the amount of loans for the clients based on foreign funds, which is a positive aspect if the rate between income interest to interest expenses is above 1.

The last group of performance indicators includes: return on equity, sales margin ratio, assets turnover ratio and capital multiplier. This ratios measure the bank capacity to produce enough cash to prevent bankruptcy.



**Chart 6: The evolution of final performance ratios**

Source: authors' calculus based on the financial statements

As we observed, the return on equity, dramatically decreased during the period, but after the crisis the indicator is negative, which shows an inefficiency equity management. The same evolution is also shared by sales margin, which means that the internal and external funds were allocated to the clients which had financial problems started in 2011.

In order to identify the causes of banks' solvency, we chose a sample of banks. We considered ROE and ROA as dependent variables and other equilibrium variables like independent variables.

### A. The ROE model

The statistic analysis shows that between the dependent variable ROE (Return on equity) and the independent variables KFP (Long term funds to Long term assets) and RAD (Loans to Deposits Ratio) there is a strong linear connection as follows.

#### a) Build the linear model:

Im (formula = ROE ~ KFP + RAD)

Residuals:

Min 1Q Median 3Q Max

-21.276 -7.989 -0.269 5.009 47.429

Coefficients:

```

Estimate Std. Error t value Pr(>|t|)
(Intercept) -10.61820 11.13427 -0.954 0.345
KFP 0.01617 0.05592 0.289 0.774
RAD 0.30395 0.06363 4.777 1.5e-05 ***
---
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

Residual standard error: 12.48 on 52 degrees of freedom  
 (11 observations deleted due to missingness)  
 Multiple R-squared: 0.3598, Adjusted R-squared: 0.3351  
 F-statistic: 14.61 on 2 and 52 DF, p-value: 9.221e-06

#### b) Testing the model validity

```

> ANOVAs (MODEL)
Analysis of Variance Table
Response: ROE
Df Sum Sq Mean Sq F value Pr(>F)
KFP 1 997.8 997.8 6.4021 0.01447 *
RAD 1 3556.3 3556.3 22.8182 1.496e-05 ***
Residuals 52 8104.4 155.9
---
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

**Conclusion:** Both lm and ANOVAs functions show us that the model is significant:

The model of ROE is:

$$\text{ROE} = -10.6182 + 0.01617 \text{ KFP} + 0.30395 \text{ RAD}$$

For a change of 1 unit of KFP, ROE changes by 0,01617.

For a change of 1 unit of RAD, ROE changes by 0,30395.

For a change of 1 unit of KFP and RAD, RPE changes by 0,32012.

For KFP =0 and RAD=0, ROE = -10,61182 (no action from KFP and RAD)

#### B. The ROA model

The statistic analysis shows that between the dependent variable ROA (Return on assets) and the independent variable RAD (Loans to Deposits Ratio) there is a strong linear connection.

##### a) Build the linear model:

```

> MODEL_ROA=lm (ROA~RAD)
> summary (MODEL_ROA)
Call:
lm (formula = ROA ~ RAD)

Residuals:
    Min     1Q   Median     3Q    Max
-6.4912 -1.2777  0.1618  1.2043  8.9709

Coefficients:

```

```

Estimate Std. Error t value Pr(>|t|)
(Intercept) -3.93588 1.09673 -3.589 0.000726 ***
RAD 0.07666 0.01181 6.492 2.96e-08 ***
---
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

Residual standard error: 2.702 on 53 degrees of freedom  
 (11 observations deleted due to missingness)  
 Multiple R-squared: 0.4429, Adjusted R-squared: 0.4324  
 F-statistic: 42.14 on 1 and 53 DF, p-value: 2.962e-08

## b) Testing the model validity

> ANOVAs (MODEL\_ROA)  
 Analysis of Variance Table

```

Response: ROA
Df Sum Sq Mean Sq F value Pr(>F)
RAD 1 307.76 307.756 42.142 2.962e-08 ***
Residuals 53 387.05 7.303
---

```

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

**Conclusion:** Both lm and ANOVAs functions show us that the model is significant:  
 The model of ROA is:

$$\text{ROA} = -3.93588 + 0.07666 \text{ RAD}$$

For a change of 1 unit of RAD, ROA changes by 0,07666.

For RAD = 0, ROA = -3,93588 (no action from RAD)

## 5. Conclusions

Due to the complexity of the work carried out by banking institutions, performance implies a complex phenomenon with adverse consequences for banks, often in a chain of interrelated events, which may have common causes.

The performance of the banking system reflects the effectiveness of mobilization and allocation of capital, and in that sense banks are forced to mobilize domestic savings, allocate funds for investment, which contribute to increased productivity, structural changes in the economy. Thus, performance is the result of activities undertaken by banking institutions to achieve the desired outcome. This information has become increasingly important, with higher need for performance management. In addition, performance can be achieved only by taking risks that can be administered systemically or at the entity level.

Performance management requires a thorough weighing of managers regarding the necessary compromises to be made between growth, risk and return. Finally, our results show that in the sample of banks analyzed the return on equity depends on the long term funds/long term assets and loans/deposits ratio, while the return on assets depends only on loans to deposits ratio.

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# DO THE ECONOMIC INDICATORS INFLUENCE FINANCIAL PERFORMANCE OF NON-LIFE INSURANCE SECTOR IN PAKISTAN?

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**Abstract:** *The role of the non-life insurance sector and links into other sectors is vital for the economy. The primary macroeconomic variables such as real GDP, unemployment, and inflation have been taken into account as explanatory variables to assess the impact on financial performance of non-life insurance (FP-NLI) sector for the period of 2009-2013. The management of non-life insurance firms should consider the macroeconomic environment, real GDP, unemployment, and inflation in addition to firm specific characteristics while managing profitability. A significant positive association has been observed between real GDP and FP-NLI sector. It is also observed that unemployment and inflation have a negative impact on financial performance but statistically significant only in case of unemployment.*

**Keywords:** *Non-life insurance; real GDP; inflation; unemployment; financial performance.*

**JEL Classification:** G32; O47; G220; E23; E31.

## 1. Introduction

Diversification of risk is an important element of risk management strategy. Risk can be avoided by using different modes e.g. hedging, options, and insurance. This determines that insurance is a good tool to transfer the risk. The role of the insurance industry in the emerging economy like Pakistan can't be ignored. In 1976 the National Insurance Corporation (NIC) was established to take the responsibility of general Insurance businesses i.e. related to any public property. In Pakistan insurance industry has been classified into two parts (i) Life insurance (ii) Non-life insurance. As per Insurance Ordinance, the Composite insurance is not allowed. The insurance market in Pakistan is going under major structural changes because of minimum capital requirement as per Insurance Ordinance 2000. Due to this many insurance firms are merged. Outreville (2011) documented that every country has its own fiscal and legal rules that consequently have an impact on life and non-life insurance market.

Vaughon & Vaughon (2003) have classified the insurance business into two categories life insurance and non-life insurance business. Life insurance - those which are engaged in selling the life insurance, annuities, and the products related to pensions; whereas, the Non-life or *general* insurance companies are those which are engaged in the sale of other types of insurance. The Non-life insurance companies can offer insurance in different forms (i) Automobile insurance, (ii) Marine and marine cargo insurance (iii) Pet insurance (iv) Property insurance (v) Travel insurance (vi) Workers' compensation insurance (vii) Stock Insurance (viii) Fire insurance.

The objective of this study is to explore the impact of macro-economic indicators on the financial performance of general insurance companies. The financial performance of insurance companies is associated with the overall development of the country economy. Insurance companies act as a financial intermediary in the service industry. Several macroeconomic indicators are determinants of financial performance but in literature mainly are GDP growth, inflation, and interest rates (Ameur and Mhiri, 2013; Staikouras and Wood, 2011; and Macit, 2012). The key intention of this study is to determine whether overall economic development influences the FP-NLI sector. Mainly GDP growth, inflation rate, and unemployment rate are discussed. Trennery (1926) stated that insurance evolved as a result of the economic development of societies.

The insurance companies are contributing toward an economy in several ways e.g. their financial and non-financial assets and utilization of these assets in the financial market, their investment strategy, what they are investing in different industries e.g. in real estate sector, stock markets, textile and cement sector etc. Another important factor whether they are investing domestically or internationally. It leads to the multiplier effect and motivates the economy toward prosperity.

Negishi (2012) reported that key function of the financial sector is to channelize financial resources from savers to users. The financial sector plays several functions (i) identification of fund savers and seekers, in other words, borrowers and lenders-efficient allocation of funds (ii) to attain economies of scale by lowering the cost of capital and specialization (iii) it supports liquidity and risk management.

In emerging economy like Pakistan, it is needed to identify the macroeconomic factors which impact the performance of non-life insurance companies. The dependent variable for this study is the return on assets (ROA) and the data was gathered from Financial Statement Analysis of financial sector issued by State Bank of Pakistan. The independent variables are real GDP, unemployment, and inflation. The data is collected from the database of Federal Bureau of Statistics.

The remainder of this paper is arranged as follows: section 2 is related to the literature review. Section 3 discusses data and methodology. Section 4, 5 & 6 contains findings, conclusion, and recommendations of the study.

## **2. Literature Review**

Haiss and Sümegi, (2008) have reported that in financial industry the role of insurance sector is very important, it supports the economy mainly in following five ways: First, the insurance sector helps in achieving the efficient allocation of resources, second, by reducing the transaction costs, third, it facilitates to create the liquidity, fourth by the achievement of economies of scale in investment and fifth, it supports by spreading of financial loss.

Nissim (2010) pointed out that the growth of insurance industry is linked with the overall economic activity. The demand for non-life insurance products is directly affected by the income of consumers in the market. Christophersen and Jakubik (2014) have empirically analyzed that there is a strong association between insurance companies' premium and country economic growth and unemployment. The relationship between the GDP and the growth of insurance sector has been studied by different authors (Esho et al. 2004; Beck & Webb 2003; and Outreville 1996). The higher GDP leads to greater insurance growth for both life and non-life sector. This is due to increase in income; individuals spend more money to fulfill their

needs such as houses and vehicles that need to be insured. Therefore, greater demand is generated for non-life insurance products are created.

D'Arcy and Gorrivett (2000) have explored that in the balance sheet liability side of the property-liability insurers is greatly affected by inflation. Inflation is directly linked with long-term liabilities of insurers; it directly affects the future profits of insurers. Ahlgrim and D'Arcy (2012) have examined the relationship between inflation or the deflation and insurance industry. It has been indicated that inflation severely affect the property liability of insurers in different ways e.g. the costs of future occurring claims on the currently issued policies and the calculation of loss reserves. D'Arcy and Au (2008) and D'Arcy, Au, and Zhang (2009) have observed that calculation of the loss reserves is generally based on the hypothesis that the rate of inflation does not change over the years and it remains constant, it means currently prevailing rate and it will continue until the claims are matured. Therefore, if inflation rate increases more than of expectations then cost will increase and will definitely affect long-term liabilities of insurers.

The relationship between unemployment and demand for non-life insurance sector has been studied by few researchers. The reason might be that the impact of unemployment variable is partially determined by the income effect variable (Lenten & Rulli, 2006). However, this study has included unemployment as an independent variable in the regression model; because its effect on the FP-NLI sector can not be described only by income effect. A negative association is expected between unemployment and FP-NLI sector because unemployment discourages to buy non-life insurance products consequently it decreases demand and profitability of non-life insurance sector. Increasing unemployment rate in the economy will increase the number of losses for non-life insurance sector; since it will direct to crime and recession, in turn, decreases premium levels (KPMG, 2002).

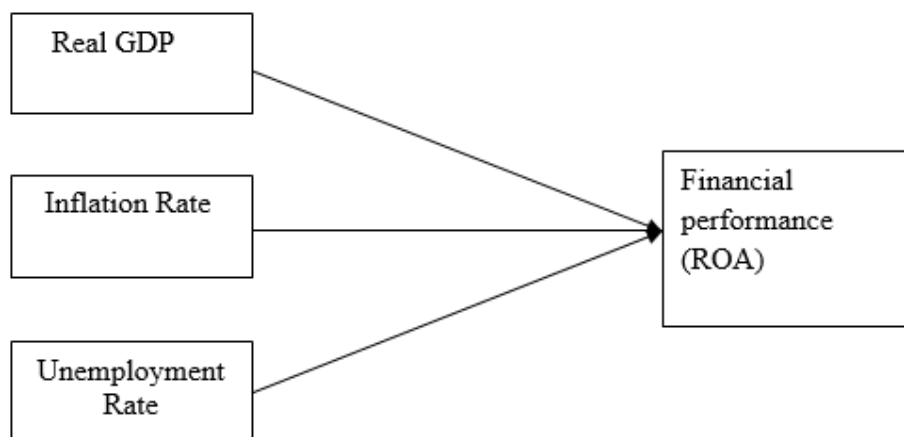
Eling and Luhnen (2008) reported that in non-life insurance, premiums are directly affected by the inflation rate in the country. Blum et al (2002) have identified different causality links between insurance sector and overall economic growth (i) in case of demand e.g. increase in economic growth will ultimately lead to increase in demand for insurance (ii) in case of supply e.g. insurance growth reduces economic instability in the short run and therefore it supports to economic growth in the long run.

### **3. Methodology and Sources of Data**

The population of this study is non-life insurance companies in Pakistan. The data of 40 public limited non-insurance companies has been selected. The five years data 2009-2013 is collected from Financial Statement Analysis of financial sector reported by State Bank of Pakistan. The macroeconomic variables data has been collected from Federal Bureau of Statistics of Pakistan. The Federal Bureau of Statistics (FBS) is responsible for the collection, compilation, and analysis of statistical data relating to different sectors of the economy. It also publishes statistical data and conducting research with a view of improving statistics.

The relationship between non-life insurance companies' financial performance and macroeconomic factors is modeled by employing multiple regression analysis. The explanatory measures have been decided after reviewing the literature in order to make this study objective oriented. These measures are ROA, Real GDP, Inflation rate and Unemployment rate. Multiple regression analysis is applied to study the effect of macroeconomic variables on the performance of non-life insurance firms.

### 3.1 Research Model



### 3.2 Hypotheses and variables

#### 3.3 Dependent variable

Financial performance - Return on Assets (ROA)

The ratio of ROA is a dependent variable in the regression model.

$$\text{Return on Assets (ROAs)} = \text{Net Profit} \div \text{Total Assets}$$

ROA is a very well-known measure of financial performance, it evaluates the efficiency of the management in a sense how well they are utilizing their total assets to generate profits, high profits will ultimately maximize the wealth of owners. Generally, higher ROA is considered better.

#### 3.4 Explanatory Variables

##### 3.4.1 Gross Domestic Product (GDP)

Real GDP is a major measure to evaluate the growth of the economy.

Haiss and Salmegi, (2008) explored that an index for a healthy economy is reported in form of GDP growth. They explained that performance of insurance industry is dependent on the overall economy development of the country.

$$\text{Real GDP} = \text{Annual growth rate of economy}$$

*H1: GDP has a positive statistically significant association with the financial performance of non-life insurance firms.*

##### 3.4.2 Inflation Rate

It is valuable to examine the effect of inflation on non-life insurance sector financial performance because this directly affects the households and companies financial resources. The increase in inflation encourages consumers to reduce their savings and influences monetary profits of non-life insurance in the long-run period. Therefore, it negatively affects the FP-NLI sector which was documented by different authors in the literature such as (Beck & Webb, 2003 and Outreville, 1993).

$$\text{Inflation Rate} = \text{Annual \% change in consumer price}$$

*H2: Inflation has a negative statistically significant association with the financial performance of non-life insurance firms.*

### 3.4.3 Unemployment Rate

Beenstock et al (1988) examined that high unemployment rate in the economy negatively affects the growth of insurance. Under high unemployment rate, it's difficult for insurance firms to prosper because household is unwilling to spend the limited income for non-life insurance annuities. This behavior makes more sensitive to policyholders toward purchasing new property and durable goods; this restricts demand for insurance. Therefore, it influences negatively the overall FP-NLI firms.

Unemployment rate = Annual % of labor force i.e. without jobs

*H3: Unemployment has a negative statistically significant association with the financial performance of non-life insurance firms.*

## 4. Empirical Findings

### 4.1 Correlation Matrix

Table 1 presents correlation matrix between dependent and independent variables. As expected, real GDP is statistically positively correlated with FP-NLI sector, signifying that increase in real GDP is an increase in profitability of non-life insurance sector. In addition, inflation and unemployment are negatively correlated with FP-NLI sector. This indicates that these variables are important measures in explaining FP-NLI and thus should be included in the regression analysis.

### 4.2 Descriptive Statistics

Table 2 indicates the mean score of macroeconomic indicators for financial performance with their relevant standard deviations. The average book profitability ratio of sample firms is 1.714 and the standard deviation is 0.886. The mean value of real GDP and unemployment is 3.760 and 11.91, and the standard deviation is 0.901 and 3.559 respectively. This implies that real GDP and unemployment are capitalizing their impact on the profitability of non-life insurance firms.

**Table 1:** Correlation matrix for main variables. The variables are defined as follows: Return on Assets (ROA) is calculated as net profit / total assets. Real GDP is measured by the annual growth rate of an economy. Inflation is quantified as the annual percentage change in consumer price. Unemployment is calculated by the annual percentage of labor force i.e. without jobs.

Variables	ROA	Real GDP	Inflation	Unemployment
ROA	1.000			
Real GDP	0.6171	1.000		
Inflation	-0.9381	-0.8489	1.000	
Unemployment	-0.0549	-0.0606	0.3244	1.000

**Table 2:** Descriptive statistics for main variables. The variables are defined as follows: Return on Assets (ROA) is calculated as net profit / total assets. Real GDP is measured by the annual growth rate of the economy. Inflation is quantified as the annual percentage change in consumer price. Unemployment is calculated by the annual percentage of labor force i.e. without jobs.

Variables	Mean	Standard Deviation
ROA	1.714	0.886
Real GDP	3.760	0.901
Unemployment	11.91	3.559
Inflation	9.48	4.60

#### 4.3 Financial performance and macroeconomic indicators

In this part, by using multiple regression analysis, it is examined whether macroeconomic variables affect the FP-NLI or not. Regression results in table 3 quantify the impact of real GDP, unemployment and inflation on the FP-NLI sector. Results indicate that inflation and unemployment are negatively related with FP-NLI sector. Real GDP is positively related to financial performance. R-square 90% value shows that this much variation in the dependent variable i.e. ROA is due to three independent variables – real GDP, Inflation, and Unemployment. The value of F-statistics is 108.98; this indicates the fitness of model, the relationship between dependent and independent variables are good.

**Table 3:** Regression Coefficient Estimates

Statistics	Financial performance-ROA		t-
	Coefficients		
Intercept / Constant	3.761	2.487	
GDP	1.823		4.035
Inflation	-0.048		-0.762
Unemployment	-0.877		-
9.411			
R square	.90		
F-statistic	108.980		
No. of firms	40		

Based on results, it is reported that GDP has a positive (1.823) relationship with the performance of non-life firms and it is statically significant (t = 4.035) at a confidence level of 95%. It means that the growth of real GDP will affect the FP-NLI firms positively; therefore, the growth of non-life insurance sector is associated with the growth of the economy. More economic growth more demand for non-life insurance products, then the growth of insurance sector will ultimately activate the savings from savers to lenders.

Inflation has negative (-0.048) association but statistically insignificant ( $t$  -0.762) impact on financial performance. The increase in inflation reduces the purchasing power of consumers. Due to inflationary trend in the economy, savings will suffer and they will not go for durable goods e.g. automobiles and house construction; it will definitely affect the FP-NLI sector. Unfortunately, in Pakistan constant high rate of inflation in current years has significantly reduced the real premium growth rates. Unemployment has negative (-0.877) association, but it impacts financial performance statistically significant (-9.411). This shows that FP-NLI sector suffers from the unemployment. It is commonly believed that when there is unemployment in the economy, household consumers will purchase less and will consume only for necessary goods. When they will not buy durable goods, they will not prefer to have insurance policy. Same at the corporate level, they will produce less and no more investment in tangible assets, this behavior will negatively affect the FP-NLI sector. Therefore, it is reported that there is a close interaction between the non-life sector and the overall macroeconomic environment. As and when; improvement is predicted in GDP, inflation, and unemployment, it will encourage the overall performance of non-life insurance sector.

## 5. Conclusion

The aim of this article is to study the impact of macroeconomic variables on the FP-NLI sector. Whether macroeconomic environment really matters for insurance firms? The results indicate that macroeconomic variables namely real GDP, inflation, and unemployment are true determinants of FP-NLI sector. Real GDP and unemployment have statistically significant impact on the performance of non-life insurance sector. From the results, it can be concluded that non-life insurance sector performance is associated with overall economic development. Economic policies are key driving forces for a financial performance of insurance sector. Therefore, economists, while designing economic policies should consider the impact of key macroeconomic indicators on the financial performance of the financial sector. Besides this, insurance sector should strive itself to improve financial performance because it is generally perceived that insurance firms are not friendly. The households and other corporate sectors are reluctant to have an insurance policy for a number of reasons (i) that claim compensation is very difficult (ii) it requires lengthy process and documentation. Therefore, trust and image positioning for insurance sector is important.

## 6. Recommendations

The Securities and Exchange Commission of Pakistan (SECP) should enhance the image of Pakistan insurance industry by issuing directions on transparency and financial security, code of good governance and sound market practices. The Insurance Association of Pakistan (IAP) exists but it is not capitalizing its role, for the promotion of insurance sector, IAP should take number of steps (i) arrange forums for analyzing issues and formulate solutions (ii) develop good relations with regulatory bodies for better regulatory reforms rather than just at recipient end (iii) need to establish insurance institutes, attract more young people to insurance related professions and employ more technical persons in the industry.

Future research may be carried out by comparing the financial performance of life insurance companies with non-life insurance companies. Islamic insurance companies' performance can also be compared with the conventional insurance

companies. The data from Pakistan can also be compared with the insurance companies of the western countries.

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## IMPACT OF GOVERNMENT SPENDING ON INCOME INEQUALITY

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**Abstract:** *Fiscal policy is an essential tool of government to influence the operation of the economy in the country. Despite the fact that each country faces a number of challenges that are specific just for the country, they also have common objectives. One of these is the redistribution of income through taxes and spending from the state budget. The aim of redistribution is an effort to eliminate income inequality and reduction of population at risk of poverty. Can the government through the provision of public services, transfer payments, and total government spending achieve the goals related to income inequality and poverty? Representatives of governments often point to the fact that the taxes paid can reduce income inequalities among individuals by withdrawing part of the revenue mainly of people with high incomes. These funds then directly (through transfer payments) or indirectly (in particular through public goods) are meant to help low-income residents. Through analysis of the impact of government spending on selected indicators of inequality (Gini coefficient, Misery Index and the number of people at risk of poverty), we measured the effectiveness of the use of government spending and thus the tax burden across the EU. Achieving the objectives of the Government's social policy has been measured by the correlation coefficient. Since almost all EU countries point to an equal share of government spending in GDP, government spending per capita of the country was chosen as a fundamental indicator of differentiation. Thus we can more closely scrutinize not only the effectiveness of government spending on selected indicators, but also whether the size of government spending affects correlation expenditures and selected indicators for measuring income inequality. In conclusion, we consider that not only the size of government spending, but especially the specifics of economic policy in the individual countries are more effective in the fight against poverty than the actual increase in government spending. Finding the appropriate size of government spending and tax rate, however, is not only an economic question, but often a political one.*

**Keywords:** *government spending; the Gini coefficient; Misery Index; poverty; the EU countries.*

**JEL Classification:** *E 01; H 50.*

### 1. Introduction

Economic policy is different for each country and during the existence of the state it is influenced by many factors. Besides the classical production facilities of a country, there is also important historical development and the vital changes that have taken place in the country, but also the composition of the government, or the frequency of its rotation. Despite the diversity of implementation of economic policy in each country the common feature for all is that they are involved in a budgetary or fiscal policy. *Fiscal policy* is one of the fundamental policies of the government and is attributed to its crucial role in particular with regard to financial flows passing through

the state budget. Although the theoretical circles pay great attention to, especially, the amount of income to the state budget resulting mainly from taxes, it is important to follow what government revenues are used on and especially what benefits and to whom they bring.

On the other hand, the government through collected taxes redistributes allocated funds to selected economic entities, not only through transfer of payments as well as the financing and provision of public goods and utilities such as education, health, road construction (Sowa 2015). Some authors argue that high-income groups benefit most from the government spending, but people with higher incomes can pay private hospitals, schools, and do not have to use the services provided by public funds. On the contrary, such "superior" service, or service additionally financed is unavailable for people with low incomes.

While on the one hand, part of the revenue collected in the form of taxes from inhabitants, on the other hand, the government spending is specifically distributed. Basic functions of fiscal policy are stabilization, allocative and distribution, respectively redistribution functions. What, however, is hidden in different functions is no longer so clear even in the textbooks of economic policy, or among economists. According to Slany (2003) the task of stabilization policy is to affect the economy of the country in order to achieve steady economic growth at a *"healthy rate of inflation, high employment and a fair balance of payments"*. Allocative function has the task of providing public goods and distribution in turn redistributes income to residents in order to prevent poverty. Kubicek (2006) shares the same opinion on definition of the functions with Slany. The most debated feature is deemed distribution or redistributive function, in which the government is trying to redistribute income generated in the market economy in such a way the market's spontaneous order would not create. According to Tuleja (2007) the unwanted distribution of income and wealth takes place in the market, and distribution function of fiscal policy allows correcting these adverse consequences of the market. What is, however, an equitable distribution of wealth and the need to redistribute income? Alternatively, can wealth be redistributed? According to Němcova and Žak (1997) *"there is something like a threshold - a socially acceptable inequality in the society"*. According to those authors, it is possible that from time to time socially acceptable boundaries are exceeded and social destabilization of society occurs. It may be reflected in social as well as political destabilization. Still, the question remains, *where the acceptable limit is*. Does this apply in general or only for certain countries? Is it the same for all countries or for each is it different? Very often political instability causes appeal of the government and none politician has an interest in seeing that there is a premature end to their political career. These reasons are strong enough for politicians to interfere with the market mechanism attempting to redistribute income.

In addition to the above mentioned features of fiscal policy, Žďárek (in Spěváček et al. 2012) introduces the function of providing public goods and services as a separate function of government. Redistributive function then has a role, especially in the *"social policy, which is to preserve social peace in society and prevent poverty."* Allocative function of government may change the prices and costs, and subsequently indirectly influence the pattern of consumption and production. The stabilization function is related to the economic cycle and government by means of this function long-term economic growth should be ensured.

*The aim of the analysis is to determine whether government spending affects*

*income inequality in the country, i.e. whether through the expenditure side of the state budget the government can steer public finances so that they are subsequently led to the reduction of income inequality (Gini coefficient, Misery Index) or to decrease of poverty.*

## **2. Income inequality**

Especially, since the recent economic crisis, which was reflected in almost all countries of the world, once again many theorists have returned to the topic of opening the income scissors, accretion of wealth in only one population group allied with the increasing number of people with low incomes, and for all the consequences that income and pension inequality entails. The theory distinguishes two basic concepts - income inequality and inequality in wealth. While income inequality is actually income inequality and is a dynamic process, inequalities in wealth may be the cause of income inequality, but can also be due to many different circumstances (inheritance, win, good investment ...). Inequalities in wealth can be regarded as a static variable. It is necessary to distinguish the concept of individual income inequality (discussed in the analysis) and income inequality concerning the family and family life (EU-SILC).

Particularly income inequality is the main issue for frequent analyses and studies of mainstream economists. However, if we focus on the very concept of income inequality, then the definition is rather complex. *Income inequality* and poverty associated with it can be understood as an objective as well as a subjective value. Objective assessment of income inequality is mainly based on hard data, which are processed mainly by economists, politicians and statisticians. Subjective income inequality is based on the opinions of respondents and is examined by sociologists and psychologists. This perception of income inequality and poverty does not constitute a generally accepted definition. Several authors refer to the definition of income inequality by Cowell. For example, Veselovská (2015) states that: *"inequality suggests a deviation from a certain idea of equality."* Labudová (2013) complements this idea with the fact that *"it is not clear what is meant by social standards and according to Cowell the standard of social equality was defined in nine different ways."* Gerbery (2010) presents though acceptable, but hardly evaluable definition: *"Income inequality refers to the shape of the income distribution; its level is not linked to any absolute substance and becomes meaningful only as a relational category."*

Most authors defining income inequality refer to a kind of hypothetical equality in income, which is desirable and income inequality causes undesirable phenomenon that needs to be removed. The question is whether it is possible to achieve income equality when one man differs from the other by their knowledge, skills, diligence and many other features that make them absolutely unique and irreplaceable. Why we should take efforts to achieve the output of the same rating if we are so different. The very nature of things shows that it is neither desirable, nor possible.

Government uses primarily fiscal policies to reduce disparities between the extreme high and low income groups of the population. On the one hand, the government removes part of the income from residents and businesses through taxes, that is, for instance by Atkinson (2016), certainly reflected in the decline in poverty. But there is a group of economists, according to whom, in the words of R. Lucas, *"the effort to focus on the distribution is one of most sexiest and at the same time the most toxic tendency ... The potential to improve the life of poor people that we can*

*find another way of distribution of the current production is almost zero, if we compare it with apparently unlimited potential to increase production*" (Atkinson 2016). According to the main economic stream there is a correlation among income inequality, poverty and fiscal policy. The government through taxation removes part of the income of rich citizens which are then primarily offered through the provision of direct, transfer payments or public goods to citizens with low incomes.

### 3. Methodics

To analyze the effects of fiscal policy on selected indicators of income inequality, we selected all 28 European Union countries. Based on the size of government expenditures per capita the EU countries were divided into four groups. The *first group* consisted of countries where the size of annual expenditure per capita is greater than or equal to € 1 million. This group includes Belgium, Denmark, Germany, Luxembourg, the Netherlands, Austria, Finland and Sweden. The *second group* includes countries where spending per capita was in the range of € 500,000 to € 1m: Ireland, Spain, Italy and the United Kingdom. The *third group* is the most numerous and consists of those countries in which expenditure per capita is in the range from € 100,000 to € 499 thousand. This group consists of the Czech Republic, Greece, Cyprus, Hungary, Malta, Poland, Portugal, Slovakia, Slovenia and Croatia. The *last group* of countries with the size of government spending per capita less than € 100,000 includes countries such as Bulgaria, Estonia, Latvia, Lithuania and Romania. With the exception of Bulgaria and Romania, which belong to countries with higher middle income dwellers are all other countries classified as countries with high per capita income.

Data from Malta and Cyprus for this analysis were not available. All other EU 28 countries' data were available in Eurostat, the World Bank and the World Income Inequality Database. The longest period with available data covered the years 1995 - 2015. In the shorter term, there were available data for the indicator - number of people at risk of poverty, which is in the Eurostat database available only for the years 2003 - 2015.

To assess the impact of government spending on selected indicators we used the *correlation coefficient*, which value reflects the tightness of the relationship between two independent variables. If the value of the correlation coefficient is equal to or exceeds the value of 0.70, it means a strong dependency between variables. If the value of the correlation coefficient is positive, variables evolve in the same direction. If not, the value of the variables evolves as inverse; that is a decrease in one and a growth in another. If the correlation coefficient is less than 0.70, then there is a little dependence or a mean dependence between variables. In the text, we will focus only on these dependences, wherein the correlation is strong, and wherein at the same time the correlation is statistically significant, i.e. p-value is less than 0.05.

The first evaluation indicator, which reflects country's income inequality, is *Gini coefficient*. The Gini coefficient is a mathematical expression of the Lorenz curve, which divides the country's population according to their income and the cumulative number of households that receive this income. Gini coefficient is between 0-1, wherein the more the value is close to 0, the income is distributed more equally and vice versa, the uneven distribution of income is when the value is more close to 1. Gini coefficient is obtained from the database of the World Income Inequality Database, which contains the value of the Gini coefficient from multiple sources. Due to the introduction of the time series we used the Gini coefficient values

calculated by the European Commission in 2005, Eurostat and Eurostat 2016. Indicator of Gini coefficient was accompanied by the division of the population groups by income to deciles.

The second indicator that we used in measuring the impact of government spending is an indicator called the *Index of Economic Disconformity or Misery Index*. Its creation is credited to A. Okun, who calculated unemployment and inflation in this indicator. Both values are negative for residents. While unemployment concerns them directly, especially for the loss of income, but also for other negative consequences in social and psychological areas, inflation is viewed less negatively by residents. In particular, it is the problem of hidden taxation, which is most evident in the galloping inflation or hyperinflation.

The index of economic disconformity was renamed as the Misery Index, when R. Regan used this designation (Misery Index) to negative presentation of the results of its predecessor in the presidential election in 1980 - J. Carter (Lovell M. C. Tien, P. L. 1999).

The last variable was the *number of people at risk of poverty*. The data are available in Eurostat's database for all countries of the European Union in the period of 2003 - 2015.

### **3.1. Government expenditure**

When evaluating the effects of government expenditure on individual variables, the government expenditure is an independent variable. Their size varies each year and usually with an increasing number of years there occurs growth in the size of government expenditure, which mainly politicians justify as the need for greater redistribution or caring for socially disadvantaged.

When analyzing countries according to different groups, the *first group* has increased government spending by an average growth rate moving around 2.5. The lowest growth rates reached Germany (1.14) and the highest rate of growth in government spending per capita was in Luxembourg (4.33).

Government spending in the *second group* of countries grew at a significantly higher growth rate, which ranged from 2.65 (Italy) to 5.76 (Ireland). At the end of the review period the government spending amounted comparable levels with the first group of countries, more than € 1 million per capita. The lowest government spending per capita was in Spain with the average value of € 818,000 and the highest in Italy (€ 1,320 per capita).

Although in the *third group* of countries the government expenditure grew at the slowest pace in Greece (3.75), it was the country's highest proportion of government expenditure per capita (€ 806,000). The fastest growth rate (8.54) in costs was in Slovakia, while per capita it was the second lowest rate (0.35), the lowest average cost per head was in Poland (0.31). Government spendings per capita in the rest of the third group were among specified thresholds.

The *last group* of countries had the highest growth rate of government expenditure. It varied between an average growth rate of 9.06 (Bulgaria) and 13.22 (Lithuania), although it remained the share of government spending per capita in all countries at the lowest level among all analyzed countries. The average share of government spending on the population was the lowest in Bulgaria (€ 131,000) and the highest in Estonia (€ 324,000).

### **3.2. Gini coefficient**

Income disparities of evaluated countries measured by the Gini coefficient in the *first group* which showed the highest spending per capita, with the exception of three countries (Belgium, Luxembourg and the Netherlands) have increased. The largest decline in income inequality was shown in the Netherlands, where the Gini coefficient declined from 29 to 26.4. The largest increase in Gini coefficient was in Sweden (from 22.1 to 25.2) and in Denmark (from 20 to 27.4). On average, the highest income inequalities according to the Gini coefficient were recorded in France and reached the value of the Gini coefficient of 30. On the other hand, the lowest income inequality according to the Gini coefficient was in Finland at an average of 25.8. Neither in one country the value of the coefficient was still growing nor declining and in individual countries it varied among the maximum and the minimum value in the range of 5-10 points.

When analyzing the relationship between government spending and the Gini coefficient we found that only in the case of Belgium there is a negative correlation. The value of the correlation coefficient is statistically insignificant since it reached a value of - 0.3164. In all other countries, the value of the correlation coefficient is positive. This means that the growth in government spending also induced the growth of Gini coefficient, or vice versa, and these values are statistically significant only in Denmark (0.8769) and Germany (0.7079). At the same time in both countries p-value was greater than 0.05, which means that this is a statistically random result. In the *second group* of countries the Gini coefficient was slightly higher than in the first group. This means that despite the relatively high expenditure per capita, the average Gini coefficient varies between the value of 32.2 (Iceland) to 33.8 (Spain). During the analyzed period, the value of the Gini coefficient changed. In two countries (Iceland and Italy), income inequality declined, while higher decline was observed in Iceland (from 33 to 30.8) than in Italy (from 33 to 32.4). In two countries (Spain and the United Kingdom), the Gini coefficient was increased with the increase in the value of the Gini coefficient reaching less than 1 point. Gini coefficient in all countries developed unevenly and in all countries, the difference between the minimum and the maximum value of the Gini coefficient was of more than 5 points.

The correlation between government spending and the Gini coefficient in the second group shows that the value of the correlation coefficient in neither of these countries reached statistically significant tightness between variables and with the exception of Iceland, where the correlation is negative, the other three countries have a positive value of the correlation coefficient.

*The third group* comprises a total of 8 countries (for Malta data were not available and for Cyprus the data were limited). This group includes almost all countries that joined the EU after 2004, and in addition there are included Portugal and Greece. Gini coefficient like in the previous countries had a varied development. The average coefficient ranged between 26 (CR) and 36 (Portugal). With the exception of Portugal, in all other countries, the Gini coefficient decreased. The greatest decrease was shown in Slovenia, where the Gini coefficient decreased from 35.8 to 24.5.

When evaluating the correlation between the government spending and the Gini coefficient in five of the examined countries showed a negative correlation, i.e. if there was a growth of government spending, the Gini coefficient was decreased (CR, Poland, Portugal, Slovenia and Slovakia). In other countries, the correlation value is positive. A high correlation between variables was only reflected in Slovenia

(-0.79), and the value is statistically significant (p-value is less than 0.05). In other countries the value of the correlation coefficient was statistically insignificant. In three countries - Greece, Croatia and Hungary there is a positive correlation, and correlation values are low.

The *fourth group* of countries included the Baltic States together with Bulgaria and Romania. Gini coefficient in each country was developed very unevenly and the average values of the coefficient were in the range from 32.34 (Bulgaria) to 36 (Latvia). Gini coefficient was increased in four countries with the highest increases in Bulgaria (from 24 to 37), but a significant increase in the value of the coefficient was in Romania (from 37.4 to 30). Only one country recorded a decline in the value of the Gini coefficient by almost one point, from 36.2 to 25.4.

Assessment of the impact of government spending indicator of income inequality - the Gini coefficient has a negative correlation only in Estonia and this value is low (-0.28), thus we cannot consider the tightness between the assessment of variables. In other countries, the Gini coefficient is positive and statistically significant leak is expressed only in Romania (0.75), on the p-value less than 0.05. This, however, means that there is an increase of government spending and Gini coefficient in Romania, thus there is growing income inequality of population as measured by this indicator.

### **3.3. Misery index**

Misery Index value is not fully under government control because inflation falls more within the competence of the National Bank or the European Central Bank. Nevertheless, we have used this indicator. The reason is that even if the central bank decisions are independent, they are often consulted with government officials in order the objectives of economic policy are fulfilled, so indirectly the government has an influence on monetary policy. At the same time, many countries give a portion of government revenues to support employment, retraining or encourage the unemployed to become entrepreneurs. Therefore, the use of Misery index in measuring the effects of fiscal policy is on the spot.

The negative correlation between the size of government spending and the value of Misery Index was reflected in all countries of the *first group* with the exception of Luxembourg (0.33). This means that with the growth of government expenditure the value of Misery Index decreases. This assumption is also expected. A statistically significant relationship between these variables was only in Germany (-0.77) and Finland (-0.75). The two countries at the same time have a statistically significant correlation, wherein the p-value is less than 0.05. In other countries, the value of the correlation coefficient ranges among -0.09 to -0.603.

In the *second group* of countries the correlation coefficient for government spending and value of Misery Index does not reach statistically significant values in any country and in only one country the value of the correlation coefficient is negative (Italy).

When evaluating the tightness of the relationship between the value of government spending and Misery Index, the *third group* of countries is interesting. In this group five countries showed a strong correlation between variables, which is a negative correlation and which is also statistically significant (p-value less than 0.05). For the Czech Republic and Slovenia, the value of the correlation coefficient was on the border between average and strong dependence (-0.706 for the Czech Republic



and - 0,701 for Slovenia). In other countries, there were higher values of correlation (Hungary and Slovakia almost identical -0.74, and -0.876 Poland).

Despite the fact that all countries of the *fourth group* have shown negative values for a correlation between government spending and the value of Misery Index, there is no statistically strong dependence in any country.

### 3.5. Poverty

The last reference indicator is the population at risk of poverty. These data are available from Eurostat statistical databases and the number of years during which this indicator is examined is relatively short ranging up to 11 years. The strong correlation between the size of government spending and the number of people at risk of poverty is reflected in the three countries with the highest spending per capita - Denmark, Luxembourg and Austria. Statistically significant is only in the case of Luxembourg and Austria (p-value less than 0.05). In both countries, however, the correlation is positive, that is, again, as if the growth in government spending induced the growth of the number of people at risk of poverty. In other countries of the first group the value of the correlation coefficient is low and only in the Netherlands the relationship between government spending and poverty is negative.

The *second group* of countries is also interesting due to the fact that even in measuring the number of people at risk of poverty and the size of government expenditure, statistically significant correlation does not exist between indicators and all four values have reached a positive correlation.

Between government spending and the number of people at risk of poverty in the *third group*, there is a strong negative correlation in the three countries such as Poland (-0.948), Slovakia (-0.873) and the Czech Republic (-0,855) and in all countries there is a statistically significant correlation. This means that national governments are able to reduce the population at risk of poverty by means of government spending. Negative correlation, which is not strong is also reflected in Greece (-0.458) and Hungary (-0.547). In other countries belonging to this group the value of the correlation coefficient is positive and therefore government spending in Croatia, Portugal and Slovenia does not reduce poverty as measured by the number of people at risk of poverty.

Although the value of the correlation coefficient between government spending and the number of people at risk of poverty in the *last fourth group* is negative, only in the three countries the tightness between the variables under consideration is strong (Bulgaria -0.92, -0.93 Latvia and Lithuania -0.88). These values are also statistically significant as the p-value is less than 0.05.

### 4. Conclusion

At present governments give primary objective of fiscal policy to, in particular, the removal of market failures, which are often manifested in the uneven distribution of income. A considerable role in budgetary spending and government spending is directed to the provision of public services, but also the operation of ministries and government itself. There are still many reasons to increase government spending. And since the government itself does not allocate finance, it needs to be gathered from residents and businesses in the form of budget. However, does increased government spending have a desired effect? Based on the analysis of the impact of

government spending on selected variables, we have drawn the following conclusions:

- 1 *Government spending in each country of the European Union has been increased.* The average rate of growth in government spending was 2 - 13%, while government spending grew fastest in the countries in which the calculation of expenditure per capita was the lowest.
- 2 The Gini coefficient is an indicator primarily designed to measure income inequality. *In the analyzed countries, the EU ranged from 25 to 36, while its height is not dependent on the size of government spending. Gini coefficient is related to the division of the population into income groups.* Only one of the analysed EU countries (Slovenia) holds a statistically significant correlation between government spending and the Gini coefficient. Such dependency does not exist for other EU countries.
- 3 Misery index expresses the simple sum of the unemployed and inflation. Deflation is counted by the same index as inflation, i.e. in absolute terms. Unemployment as well as inflation has a negative impact on the country's population. Unemployment moves especially those residents who belong to the lowest income group to the socially disadvantaged citizens. Inflation in turn makes the population with the lowest incomes difficult to access to the durable goods or more expensive and higher quality goods and services. Not only government spending, but particularly well set up active labour market policies may affect the minimum number of the unemployed in the country. Between government spending and Misery index in the analyzed EU countries there is a negative correlation, which is statistically significant only in Germany, Ireland, the Czech Republic, Slovenia, Hungary, Slovakia and Poland. In general, *therefore, it can not be said whether the growth in government spending will have the desired impact on the value of Misery index or not.* This means that the government through the expenditure of the state budget can affect unemployment and inflation, but the country must make more functioning internal rules. At the same time we can say that if these internal rules are set well, then the amount of government spending does not matter, because dependence is manifested both in countries where expenditures per capita were the highest (€ 1 million), as well as in countries where the size of government expenditure per capita was at a range from € 100 to €499,000. The correlation for lower spending per capita was not confirmed.
- 4 Strategic programme for the countries of the EU by 2020 (Europe 2020) sets as one of the fundamental objectives the reduction of the number of population at risk of poverty or social exclusion by 20 million. In line with this objective, we evaluated the impact of government spending on variable expressing number of people at risk of poverty in the EU countries. Statistically strong dependence is manifested only in countries belonging to the third and fourth groups of countries, i.e. where the size of government spending does not exceed € 499,000 per capita. In all countries where the strong dependence was manifested, a decline in population at risk of poverty was by 10 to 20% (Poland, Bulgaria, Slovakia, Latvia and Lithuania). The Czech Republic is worth to mention as the number of people at risk of poverty fell from 19 to 14% there, which was a statistically significant dependence. The close correlation between the size of government spending and the population at risk of poverty was not reflected in any country with high expenditure per capita, while for example in these countries has been

a high proportion of the population at risk of poverty (Ireland, Italy, Spain, United Kingdom). Romania did not confirm strong dependence, though the percentage of the population at risk of poverty was high and moving at an average of 42% (a decrease from 47% to 37%). In the measurement of the relationship between government expenditure and the number of people at risk of poverty there is a need to choose appropriate policies like in the case of Misery index and government spending could help implement this policy. Therefore it is necessary to choose the optimum limit of government spending to achieve the stated objective.

Based on the analysis of the European Union countries it can be said that *the size of government spending has no impact on reducing income inequality measured by the Gini coefficient*. At the same time it is valid that *in some of the EU countries, where the size of government spending per capita is less than € 499,000, there was a strong relationship between government spending and the number of people at risk of poverty and Misery Index*. Based on the analysis, therefore it can be said that *the expenditure side of the state budget is not appropriate to be used to reduce income differences or to reduce the number of people at risk of poverty*. Through increasing the tax burden and consequent redistribution of income the EU governments do not achieve the expected goals, it is rather pointless redistribution without fulfilling the social purpose. As J. Tucker wrote in his paper *Market and Christian Morals* (2016), which deals with the teachings of the old scholastics: *"the cause of poverty is high taxes. In perpetual fear of the tax-collectors farmers prefer to leave the ground to escape the torture. As said the king Teodorico, the only acceptable is the country where no one needs to worry about tax collectors."* It is not appropriate to tackle income inequalities or poverty in countries with high per capita income via fiscal policy of the state.

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## ROMANIAN ACCOUNTING ON BOTH SIDES OF THE PRUT

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**Abstract:** *Formerly part of Romania, in the vortex of history, the Republic of Moldova remains part of the Romanian soul, with similarities and differences from multiple domains. Considering the two Romanian-speaking peoples in the literary sense, with Soviet influence is interesting to answer this question: it's the same language spoken in the accounting? How about the requirement to audit the financial statements of the economic entities? In researching the trends and the prospects of Romania's accounting it has been extensively approached the comparability with Western accounting systems. Today, as a part of the European Union, Romania can boast accounting regulations in line with European directives or even International Accounting Standards. Can we say the same thing about the Republic of Moldova? This paper presents comparatively the accounting regulations of the two countries, highlighting the similarities and the essential differences found. The research has as starting point the intention of the Republic of Moldova to integrate into the European Union, then, I studied a little further the specialized literature on the evolution of accounting, as well as the legislation in the accounting field, both in Romania and Moldova. As far as the Romanian professional accountants are concerned, the final point is the plus of knowledge, even if they are closer regarding the cultural elements and are divided by territorial boundaries. Then, I compared the mandatory elements of the financial audit in both countries. By selecting the key information in this research and then its comparative analysis, we found multiple similarities between the two countries in terms of accounting regulations. Finally, we conclude that there are economic entities in both countries which organize their accounting and are compiling financial statements under International Financial Reporting Standards (IFRS) and economic entities to which national regulations apply. In Romania only, the national accounting regulation complies with the European directives. Although we are more familiar with Romania's accounting regulations, in their application those still raise questions for the accountants. The same thing can be said about the accounting regulations in the Republic of Moldova and the interest they provoke for the professional accountants. For the implementation of the accounting regulations, in the overcoming of legal obstacles, professional accountants on both sides of the Prut speak the same accounting language, have the same interest, even if they do not have the same rules of play in full.*

**Keywords:** *accounting regulations; accrual accounting; International Financial Reporting Standards (IFRS); audit; financial statements.*

**JEL Classification:** *M41.*

### 1. General Introduction

The desire to know the accounting systems used in different countries located in different geographic areas - closer or more distant- and because, over time, the comparability of Romanian and Western accounting was intensively studied, it

appeared the desire to investigate Romanian accounting on the other shore of the Prut River in the Republic of Moldova.

The research has as its primary objective to identify similarities and essential differences between accounting regulations applicable to economic entities in Romania and the Republic of Moldova

## **2. Methodology of Research**

The elaboration of this paper starts from the study of the accounting regulations of the two countries, by using descriptive research, to identify the elements that can be analyzed. In this regard, we have identified concepts, principles, entities and regulations that can be studied.

The documentation consisted of normative acts, websites of professional organizations and scientific papers of professionals from the two countries.

Using the comparative method, we highlighted the proximity of the two accounting systems in the two countries. Countries that we have previously known to be "sisters" in terms of ethnicity, culture, geography, and history, now we know that they are also sisters in terms of accounting.

## **3. Literature Review**

The intention of the Republic of Moldova to join the European Union generated a series of political, social and economic actions meant to bring the Moldovan economy closer to the European one.

In this context, since 1991, when it declared its independence from the former Soviet Union, the Republic of Moldova goes through the reform in accounting practices, a number of professionals dedicating time to this subject.

Among the works written on this topic, we note the work of J. Armitage, M. Neider and M. Shelaru, who analyze the accounting reform in the Republic of Moldova (2003), as well as the educational reform regarding the accounting and auditing profession.

The harmonization with the accounting standards at European level has led to the implementation of International Financial Reporting Standards in Moldova since 2009, with O. Ghedrovici and S. Mihaila (2013) considering the difficulties and opportunities of the harmonization process.

The general and practical aspects regarding the transition to the application of International Financial Reporting Standards in the Republic of Moldova have been the subject of research for various authors. Ghedrovich O, Mihaila S., Erhan L, and Birca A. (2014) analyzed the development of accounting in relation to the accounting profession by identifying four phases of evolution since 1991, while Grigori L. (2015) identifies three phases of the evolution of Moldovan accounting.

## **4. Harmonization of national, Romanian and Moldovan accounting, with the European ones**

As a former communist country Romania experienced, before 1990, the Soviet influence in accounting, and the same is the Republic of Moldova, having a mandatory chart of accounts for all economic entities.

Prior to joining the European Union in 2007, Romania experienced two stages of the accounting reform. Besides the first market economy regulations, the first stage, 1990-1991, brought the legislative framework on accounting (Law 82/1991). By

taking over the French accounting system, the period of 1992-1998 brought the rules for the evaluation and presentation of accounting information (Bunget, 2005). The third stage was the period of 1999-2005, the pre-accession period of Romania to the European Union. In this period the Romanian accounting regulations were harmonized with the European ones finalized with the elaboration of OMFP 1752/2005. After Romania's accession to the European Union, the accounting regulations were aligned with the European ones through OMFP 3055/2009.

The adoption at European level of Directive 2013/34 / EU was followed in Romania by the adoption of OMFP 1802/2014, both legislative pieces approving accounting regulations for both individual and consolidated financial statements.

After declaring independence, the Republic of Moldova has experienced several stages of the accounting reform. In the opinion of the authors of Ghedrovici and all (2014), the Moldovan accounting reform has four phases:

The first phase - the years 1991-1997 - in which the role of accounting was minimized, in which the Soviet influence was still there, only since 1996, it were elaborated the accounting reforms regarding the bookkeeping, the elaboration of the financial statements and their auditing.

The second phase - the years 1998-2006 - characterized by the approval of the accounting reform, by the separation of the management accounting and the financial accounting led to the complete restructuring of the organization of the Moldovan accounting system.

In the third phase – the years 2007 - 2013 - there are significant changes in the accounting legislation by elaborating the Law no. 61/16 March 2007 regarding the audit activity and the Accounting Law no. 113/27 April 2007.

The fourth phase - the years 2014 - present - is the period of the adoption of the new National Accounting Standards, regulations on the calculation of the cost of the production and services or the accounting methods. These regulations were necessary because the Accounting and Auditing Act was only partially compatible with EU directives.

A synthesized evolution of the accounting regulations of the two countries is presented in Table no. 1.

**Table no. 1.** Evolution of the accounting regulations

Period	Romania	Republic of Moldova
1990	The first year after de Revolution of 1989	Unstudied Period
1991	The Law of Accounting	Declaration of Independence
1992 – 1993	Taking over the French accounting system	Developing accounting reforms regarding the management of accounting, the preparation and audit of the financial statements
1994 – 1997		
1998 – 1999	Harmonization of the Romanian accounting regulations with the European ones	Separation of the management accounting from the financial accounting determined the restructuring of the
2000 – 2005		
2006		

Period	Romania	Republic of Moldova
		Moldovan accounting system
2007	Accession to the European Union	Law of Audit Activity Law of Accounting
2008 – 2013	Application of International Financial Reporting Standards	
2014 – present	Adoption of accounting regulations in line with the European ones	Adoption of National Accounting Standards

Source: own processing

Analyzing the information presented, we observe that the period during which the two countries were able to adopt accounting regulations specific to a market economy is roughly the same, starting with the end of Romania's communist dictatorship in 1989 and gaining the independence of the Republic of Moldova in 1991.

During the analyzed period we find the same interest of the Republic of Moldova and of Romania regarding the harmonization and compliance of the national regulations with the European ones, even if the Republic of Moldova is not yet part of the European Union.

### 5. The Law of Accounting today

As a need for a guide in the organization and management of accounting, the accounting law presents the legal framework, the requirements and the mechanism for regulating the annual financial reporting.

In Romania, the Accounting Law no. 82/1991 republished in the Official Gazette of Romania no. 454 of June 18, 2008, as amended, establishes the requirements for the organization and management of accounting for the Romanian economic entities, regardless of whether they have the obligation to manage the bookkeeping in single entry or double entry system.

In the Republic of Moldova, the Accounting Law no. 113/2007 published in the Official Gazette of the Republic of Moldova no. 27-34 sets out the provisions of the accounting legislation applicable to all individuals or corporations, regardless of the field of activity, form of organization or ownership.

A comparative situation of the stipulations of the two Accounting Laws regarding the Accounting Principles is presented in Table no. 2, and the information on the accounting rules and accounting systems existing in the two countries is highlighted in Table no. 3.

**Table no. 2.** Comparability of accounting principles

Elements analyzed	Romania	Republic of Moldova
Accounting Principles	Not included in the Accounting Act, but mentioned in the orders of the Minister of Public Finance applicable to different types of economic entities:	Art.6 Law 113/2007:



Elements analyzed	Romania	Republic of Moldova
	<ul style="list-style-type: none"> <li>-Caution</li> <li>-Separate evaluation of asseets and liabilities</li> <li>-Evaluation at aquisition cost or production cost</li> <li>-The significance threshold</li> </ul>	<ul style="list-style-type: none"> <li>-"Separation of assets and liabilities</li> <li>-The consistency of the presentation"</li> </ul>
	Common principles applicable to entities in the two countries: Continuity of activity Accrual Accounting Persistence of methods Non-compensation	

Source: own processing

We note that although in Romania the accounting principles to be observed by the Romanian economic entities are not presented in the Accounting Law, they are the same with small differences.

First, what we define in Romania as active assets in the Republic of Moldova is presented as a patrimony: "the distinct assessment of assets and liabilities" versus "separation of assets and liabilities".

Secondly, the law of Moldovan accounting regulates the principle of Consistency of presentation, which we do not find in Romanian accounting.

**Table no. 3.** Comparison of general accounting rules

Elements analyzed	Romania	Republic of Moldova
Accounting Regulations	<ul style="list-style-type: none"> <li>- Accounting is kept in Romanian and in national currency</li> <li>- Regulatory and advisory units</li> <li>- Requirements for annual financial reporting</li> <li>- Responsibility for the preparation, approval and registration of supporting documents</li> </ul>	<ul style="list-style-type: none"> <li>- The accounting is kept in the national language and in the national currency</li> <li>- Regulatory accounting units</li> <li>- The competences of state authorities and professional organizations regarding the accounting</li> <li>- Responsibility for bookkeeping and financial reporting</li> </ul>
Accounting Systems	<ul style="list-style-type: none"> <li>- Double-entry accounting system</li> <li>- Single-entry accounting system</li> </ul>	

Source: own processing

We observe the same accounting rules in both countries in all the elements analyzed.

A comparison of the regulations on the organization of the accounting, the accounting of the patrimonial elements and the mandatory accounting ledgers is reflected in Table no. 4.

**Table no. 4.** Regulations on the organization of accounting

Elements analyzed	Romania	Republic of Moldova
Organization of Accounting	Art.11 "Possession of assets and liabilities of any kind, as well as carrying out economic and financial operations without being recorded in the accounting, is prohibited."	Art.17. "The ownership of assets of any title, the recording of their sources of origin and of economic facts without their documentation and their reflection in the accounts shall be prohibited."
	Rules of the accounting of assets - Fixed Assets(Long Term Assets) - Inventories - Receivables - Liabilities - Issued shares or other titles - Owner's Capital - Income - Expenses - Result - Profit Distribution - Recovering Loss	
Accounting Registers	Journal Entries Inventory Ledger General Ledger	General Ledger Trial Balance Other centralizing registers

Source: own processing

We find that some aspects are identical, while others differ only as names:

- Liabilities and Sources of Origin, respectively
- Economic and financial operations, respectively, economic activities
- Fixed assets respectively Long-term assets

Regarding the accounting regulation on financial statements, a comparative analysis is presented in Table no. 5.

**Table no. 5.** Annual Financial Statements

Elements analyzed	Romania	Republic of Moldova
Annual Financial Statements	<ul style="list-style-type: none"> <li>- Defining of the fiscal year</li> <li>- The mention that the definition of the components of financial statements is provided by the accounting regulations applicable to different types of economic entities</li> <li>- Drawing up and signing financial statements</li> <li>- Auditing financial statements</li> </ul>	<ul style="list-style-type: none"> <li>- Defining the management period</li> <li>- The components of the complete financial statements</li> <li>- The components of simplified financial statements</li> <li>- Signing the financial statements</li> </ul>

Elements analyzed	Romania	Republic of Moldova
	- Deadline for submitting the financial statements to the territorial units of the Ministry of Public Finance	- Presentation of the financial statements - Responsibility for the preparation of the financial statements - Audit of the financial statements

Source: own processing

We distinguish the same requirements for the preparation, signing, auditing and liability of the annual financial statements, the difference being that the fiscal year - defined in the Romanian legislation - represents the management period in the Moldovan accounting.

## 6. Conclusions

After selecting the information that could be compared, then through their comparative analysis, we found many similarities between the accounting regulations of the two countries. The different aspects were in the nature of names or, in the case of accounting principles, the type of legal regulation - the accounting law or the accounting regulation applicable to the type of economic entity.

Finally, we conclude that there are economic entities in both countries that keep accounting and prepare their financial statements in accordance with national regulations and International Financial Reporting Standards (IFRS). Only in Romania the national accounting regulation complies with the European directives. We conclude that for the correct application of accounting regulations, accountants on both sides of the Prut speak the same accounting language, provide the same information, even if they do not have identical rules for presenting accounting information.

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**Abstract:** The frequency of accounting data frauds has been increased in corporate environment. As a result of that, the research on detection of such irregularities in accounting and auditing is gaining researchers' focus. Bedford's law has been in the literature for the identification of data manipulation in accounting and auditing field. The application of this law in accounting fraud detection started in 1988 after the work of Carslaw (he observed a greater frequency of zeros and less frequency of nines in the second place in the reported earning numbers). The underlying idea about this technique is based on comparison of certain digit frequency to the expected digit pattern proposed by Bedford's law. Various goodness-of-fit test are used to analyze the data conformity to Benford's law based on a null hypothesis of conformity of empirical data to expected data pattern. This study addresses some of the most important goodness-of-fit tests that can be used to analyze data pattern and digit behavior. Most importantly chi-square, Kolmogorov-Smirnov test (KS), Euclidean distance, Joenssen's JP-square, Freedman-Watson u-square, Chebyshev distance, Z-statistics and mean absolute deviation tests are discussed with expression to calculate test statistics. Tests like Chi-Square and KS are also sensitive to size of data set, so a combination of various goodness-of-fit test is recommended in literature to make more accurate analysis of data conformity.

**Keywords:** Benford's Law; accounting and auditing; Goodness-of-fit; Conformity; Digit pattern.

**JEL Classification:** C58; M40; M41.

### Introduction

Simon Newcomb in 1881 wrote an article in American Journal of Mathematics stating that all digits don't appear equally in term of frequency. He noticed that first 2 or 3 pages of logarithmic books were more torn than later pages indicating the frequent use of those pages and confirmed an unequal frequency of the digit appearance (Newcomb 1881). However, he could not provide further evidence to this phenomenon and his findings remained unnoticed for almost sixty years. Apparently Frank Benford, unaware of Newcomb's theory, rediscovered this law in 1938 and it became Benford's Law (or the *first digit* law or *significant digit* law (Hill 1996) after the name of rediscoverer. In his famous paper 'Law of Anomalous Numbers', he used extensive dataset to analyze the digit frequency (Benford 1938). He begins by analyzing the same phenomenon as Newcomb; the first few pages of logarithmic books were more torn than latter. This implied that the first few pages were used more often than later, confirming that more numbers start with the lower digits like 1, 2 or 3 than higher digits (Benford 1938).

Benford used a comprehensive data analysis approach using 20 lists of large numbers (20,229 observations) and 10 lists of small numbers (2,968 observations). These lists include *independent* as well as *weakly dependent* data. Independent lists

contain data from sources such as street addresses, numbers from different issues of Reader's Digest, area of rivers, and population. Weakly dependent lists contain data from sources such as engineering handbooks and scientific constants. The results showed an approximate 30.6 percent of large numbers contain first digit 1 in contrast to only 4.7 percent of numbers having first digit 9. In the past 40 years, this law gained intensive research focus and is used to analyze data pattern in different fields of research i.e., image forensic (Qadir et al. 2010), computing (Hill 1996), social studies (Pericchi & Torres 2011) economics (Rauch et al. 2014) and accounting data (Nigrini 1996; Nigrini 1999). Essentially, this law is an effective tool to study financial irregularities and intentional data frauds. The notable contribution to this field is made by Carslaw 1988; Durtschi et al. 2004; Nigrini 1996; Nigrini & Mittermaier 1997 and Nigrini 2012.

This study aims to discuss various advanced statistical techniques that can be useful to check the conformity of data to Benford's law (Nigrini 2012). Particularly the main focus is to discuss various tests used in literature extensively to measure the goodness-of-fit (Joenssen 2014). Various classical and non-classical tests, such as Pearson Chi-square test, Kolmogorov–Smirnov goodness-of-fit test, mean absolute deviation test, z- statistic Euclidean distance test are discussed with their significance for empirical results and analysis.

The rest of this paper is organized as follows. Section II will outlines mathematical foundation of Benford's law, section III explains some empirical studies in detecting accounting anomalies, section IV explains various advanced statistical tools to check the conformity (non-conformity) of data. Section IV concludes.

### Mathematical Foundation of Benford's Law

According to Benford's hypothesis, real-world number starting with 1 or 2 are more than numbers starting with 8 or 9. The analysis of diverse data sets confirmed that digit 1 appears 30.6% as first digit, whereas digit 2 appears 18.5% of times as first digit (Benford 1938). The general expression for this law can be derived using logarithmic pattern as

$$P(D_1 = d_1) = \log \left( 1 + \frac{1}{d_1} \right) \text{ for } d_1 \in \{1, \dots, 9\} \quad (1)$$

$$P(D_2 = d_2) = \sum_{d_1=1}^9 \log \left( 1 + \frac{1}{d_1 d_2} \right) \text{ for } d_2 \in \{1, \dots, 9\} \quad (2)$$

$$P(D_1 D_2 = d_1 d_2) = \log \left( 1 + \frac{1}{d_1 d_2} \right) \text{ for } d_1 d_2 \in \{1, \dots, 9\} \quad (3)$$

Where  $D_1$  represents the first digit,  $D_2$  the second digit and hence  $D_1 D_2$  represents first two digits.  $P$  represents the probability of occurrence of digit pattern. The expected probabilities of first four digits are given in *table 1*. For calculating probability of the joint-digit, for example 88 has a probability of 0.49% [ $\log (1+1/88)$ ]. The probability of first two digits as 10 can be calculated as:

$$P(D_1 D_2 = 10) = \log \left( 1 + \frac{1}{10} \right) \cong 4.14\% \quad (4)$$

We can write probabilities in the form of Significant-digit law (Theodore P. Hill 1995b)

$$P(D_1 D_2 D_3 = 314) = \log \left( 1 + \frac{1}{314} \right) \cong .0014 \quad (5)$$

Table 1 shows that there is notable deviation in probabilities of smaller digits like 1 and 2 at first place. When we move towards the larger digits (8 or 9), the probabilities of digits become less evident (Nigrini & Mittermaier 1997; Alali & Romero 2013)

Table 1: Expected Digit Frequencies of Benford's Law

Position in Number				
Digit	1st	2nd	3rd	4th
0		0.11968	0.10178	0.10018
1	0.30103	0.11389	0.10138	0.10014
2	0.17609	0.10882	0.10097	0.10010
3	0.12494	0.10433	0.10057	0.10006
4	0.09691	0.10031	0.10018	0.10002
5	0.07918	0.09668	0.09979	0.09998
6	0.06695	0.09337	0.09940	0.09994
7	0.05799	0.09035	0.09902	0.09990
8	0.05115	0.08757	0.09864	0.09986
9	0.04576	0.08500	0.09827	0.09982

Source: (Nigrini 1996)

*Note:* The number 199 has three digits, 1 being first digit and 9 being 2<sup>nd</sup> and 3<sup>rd</sup> digit. The table shows that the probability of 2 as 1<sup>st</sup> digit is 17.6%, whereas the probability of 2 as 4<sup>th</sup> digit is 10.01%

### Benford's law in Accounting and Auditing

The focus of researcher on use of Benford's law started in the beginning of 90's. Since the past two decades, hundreds of studies have been published to test the validity of this law in assessing accounting statement quality (Nigrini 2005). The pioneering research in finding accounting application of Benford's law was undertaken by Carslaw (1988). His proposition of rounding the second digit is based on psychological phenomenon; where income of firms proximate to a psychological limit, managers would tend to round up the income numbers. Performing second-digit analysis of New-Zealand based firms, he found that frequency of zeros is much higher than expected. Whereas expected frequency of nines is less than expected in second digits of reported income. Moreover, the income such as \$19.98 million is being rounded to \$20 million since there is a negligible difference. Thomas (1989) observed the same phenomenon for a sample of US firms, reporting less deviation in income numbers as compared to findings of Carslaw (1988). For the firms reported losses, he observed a reverse phenomenon with less zeros and more nines.

The other notable contribution is made by Mark J. Nigrini. Using Benford's law and distortion factor model, he considered the taxpayers' behavior and reported numbers to analyze the planned evasion and unintentional error (Nigrini 1996). Other studies such as the digital analysis to check conformity to Benford's law (Nigrini & Mittermaier 1997) and rounding of transaction level data (Nigrini & Miller 2009b) to show that Benford's law can be an efficient tool for analyzing manipulation. Hill (1995a) provided a formal mathematical proof to Benford's law and demonstrated how it actually works in stock market data and other accounting data. Durtschi et al. (2004) provided an empirical evidence to Benford's law using accounting data. They observed close conformity to Law for the first digit of chosen sample. Rauch et al.

(2011) used Benford's analysis to identify the deviations in macroeconomic data of European Union countries. Their finding suggested greater deviation to this law in macroeconomic data for Greece.

However, the accounting data conforms Benford's predicted pattern the most of the time (Van Caneghem 2016; Saville 2006; Sadaf 2016; Nigrini & Miller 2009a; Nigrini 2015; Joenssen & Vogel 2014; Alali & Romero 2013). But there are certain conditions when digital analysis is not suitable. A 'false negative analysis may not present the true picture. Durtschi et al. (2004) provided the details of conditions under which Benford's analysis is more useful. Those conditions are the following: set of numbers are resulting mathematical combination (*account receivable, number of units sold\*price*), transaction level data (*expenses*), large scale data (*a full-year record of transactions*) and data having mean value greater than median and is positively skewed. While Benford's analysis is not useful when data set comprised of invoices, checks, intentionally assigned numbers or where there is no record of transaction (Durtschi et al. 2004). Benford's law has certain important properties. If a series of number, showing conformity, is multiplied by a non-zero constant, the resulting series should also conform to Benford's pattern (Wójcik 2014). This characteristic is termed as scale-invariance (Pinkham 1961). The results will be the same if series in Euro is converted into Yen. The other property is the base-invariance, where the change of logarithmic base doesn't affect the expected probability of series (Hill 1995). This Law is also power-invariant; if Benford's series is increased with a certain power, the resultant series would also be a Benford's series (Nigrini 2015).

In order to make more precise analysis any data with expected Benford's series, various statistical techniques are used to measure goodness-of fit. The actual digit distribution is compared to Benford's distribution with the goodness-of-fit test (Archambault & Archambault 2011). Joenssen (2013) analyzed the conformity of accounting data to Benford's law by using four different goodness-of-fit tests.

### Techniques for Assessing Conformity to Benford's Law

In this section, this paper discusses advanced statistical test widely used in literature for data conformity analysis to Benford's law.

#### Chi-Square Test

The most commonly used technique for comparing actual data with expected Benford's expected series is through Pearson Chi-Square goodness-of-fit test. Null hypothesis of this test is that *actual digit conforms to Benford's expected frequency* (Tam Cho & Gaines 2007). The test statistics can be calculated by following expression:

$$\chi^2 = \sum_{i=1}^k \frac{(P_i - \pi_i)^2}{\pi_i} \quad (6)$$

Where  $P_i$  is actual or observed frequency,  $\pi_i$  is expected frequency,  $K$  represents the number of observations and summation sign indicates that all calculations must be sum up together. This calculated  $\chi^2$  value is compared with critical value. If calculated  $\chi^2$  value exceeds the critical value, the null hypothesis of no significant difference between the two series is rejected (Joenssen 2014). Chi-square is also affected by size of data, so it should not be relied too much for making inference



about data conformity. When data set becomes large (5000 observations), chi-square shows a higher than critical value leading us to conclusion of non-conformity (Nigrini 2012).

#### *Kolmogorov-Smirnov Test (KS)*

Another important test for analyzing the data conformity is *Kolmogorov-Smirnov test* (Kolmogorov 1956). This test is based on all digit analysis to check the pattern of data in comparison to Benford's pattern. KS statistics uses maximum deviation from Benford's distribution. KS test statistics  $D$  uses the largest of the absolute values, called supremum in statistics term and can be calculated as,

$$D = \sup_{j=1, \dots, 9} |\sum_{i=1}^j P_i - \pi_i| \cdot \sqrt{n} \quad (7)$$

We can calculate critical value of K-S statistics using expression

$$Kolmogorov - Smirnov critical value = \frac{1.36}{\sqrt{N}} \quad (8)$$

Where 1.36 is constant for 5% level of significance and  $N$  is the number of observation (Nigrini 2012). KS statistics is also sensitive to sample size, hence its usefulness decreases when the sample size increases (Amiram et al. 2013). The applicability of this test to continuous data only and its sensitivity near center of distribution limits its usefulness (Lolbert 2006).

#### *Euclidean Distance Test*

Another important technique that is insensitive to sample size is Euclidean distance between Benford's distribution and test digit vector (Tam Cho & Gaines 2007).

$$d = \sqrt{\sum_{i=1}^9 (P_i - \pi_i)^2} \quad (9)$$

Where  $P_i$  is actual proportion and  $\pi_i$  is expected Benford's distribution. This test was used for Benford hypothesis analysis by (Morrow 2010). Previous studies used it for purely descriptive purposes (Tam Cho & Gaines 2007).

#### *Joenssen's JP-square Test*

Considering the correlation between the first digit distribution and Benford's distribution, this test performs a goodness-of-fit test to confirm the data conformity to the expected Benford's distribution (Shapiro & Francia 1972; Joenssen 2013).

$$J_P^2 = \text{sgn}(\text{cor}(f^o, f^e)) \cdot \text{cor}(f^o, f^e)^2 \quad (10)$$

Where  $f^o$  represents the observed frequency and  $f^e$  represents the expected frequency. For small sample size, testing only first digit is useful in this test. Otherwise, testing first two digits is useful for analysis of large sample (Joenssen 2013).

### Freedman-Watson U-square Test

Freedman's (Freedman 1981) extension of Watson's (Watson 1961)  $U_n^2$  statistics evaluates the difference between empirical distribution and Benford's distribution to assess the data conformity by goodness-of-fit. The test statistics can be calculated by following expression,

$$U^2 = \frac{n}{9 \cdot 10^{k-1}} \cdot \left[ \sum_{i=10^{k-1}}^{10^k-2} (\sum_{j=1}^i (f_j^o - f_j^e))^2 - \frac{1}{9 \cdot 10^{k-1}} \cdot \left( \sum_{i=10^{k-1}}^{10^k-2} \sum_{j=1}^i (f_i^o - f_i^e) \right)^2 \right] \quad (11)$$

Where  $U^2$  is the Freedman - Watson  $U^2$  and  $f_i^o$  and  $f_i^e$  represents the same observed and expected frequency of digit  $i$  and  $n$  denotes the number of observations.

### Chebyshev Distance Test

This test uses the *Chebyshev* distance between actual and observed digit proportion and performing a goodness-of-fit test by reducing the sample to specify significant. The purpose of test is to assess the data conformity to Benford's distribution (Morrow 2014). The test statistics can be calculated as,

$$m = \max_{i = 10^{k-1}, \dots, 10^k - 1} |f_i^o - f_i^e| \cdot \sqrt{n} \quad (12)$$

Where  $f_i^o$  and  $f_i^e$  denote the actual and the expected digit proportion (Joenssen 2015).

### Z-Statistics

Z- Stat is a popular measure that is actually based on degree of deviation from the Benford's proportion. Z-statistics considers the absolute difference between the actual frequency and the expected Benford's frequency.

$$Z = \frac{|f_i^o - f_i^e| - \left(\frac{1}{2N}\right)}{\sqrt{\frac{f_i^e(1-f_i^e)}{N}}} \quad (13)$$

Where  $f_i^o$  and  $f_i^e$  denote the actual and expected digit proportions,  $N$  denotes the number of observations. The term  $\frac{1}{2N}$  is actually the correction term and we should use it when the difference between actual and expected proportions is larger than this term (Nigrini 2012). The value of Z-Stat increases as an increase in the difference between actual and expected frequency. As a rule, Z-Stat values of 1.96 or higher has  $p$ -value of 0.05. This is the cut-off level and hence our null hypothesis is rejected when the Z-value exceeds 1.96 (Sadaf 2016; Alali & Romero 2013).

### Mean Absolute Deviation (MAD)

MAD considers the absolute value of difference between actual and expected proportions. We can calculate MAD as

$$MAD = \frac{\sum_{i=1}^K |AP - EP|}{K} \quad (14)$$

Where  $AP$  and  $EP$  are the actual and the expected proportions of digits. MAD test is preferred since it is not affected by number of observations.

MAD test overlooks the number of observations in calculating the test statistics. These critical test values are calculated by Nigrini (2012) on the basis of his own calculations. So, these values must be referred to with great attention (Lolbert 2006).

**Table 2: Critical MAD Values and Results**

Digits	Range	Results
First Digits	0.000 to 0.006	<i>Close conformity</i>
	0.006 to 0.012	<i>Acceptable conformity</i>
	0.012 to 0.015	<i>Marginally acceptable conformity</i>
	Above 0.015	<i>Nonconformity</i>
Second Digits	0.000 to 0.008	<i>Close conformity</i>
	0.008 to 0.010	<i>Acceptable conformity</i>
	0.010 to 0.012	<i>Marginally acceptable conformity</i>
	Above 0.012	<i>Nonconformity</i>
First-Two Digits	0.0000 to 0.0012	<i>Close conformity</i>
	0.0012 to 0.0018	<i>Acceptable conformity</i>
	0.0018 to 0.0022	<i>Marginally acceptable conformity</i>
	Above 0.0022	<i>Nonconformity</i>

Source: (Nigrini 2012)

## Conclusion

The frequency of accounting data frauds has been increased in corporate environment. As a result of that, the research on detection of such irregularities in accounting and auditing is gaining researchers' focus. Benford's law is one of the effective tools used by researchers in order to understand the required data pattern. The use of Benford's law in empirical studies in examining financial data irregularities has gained enormous attention in past 30 years. The idea behind this approach is to compare the digit pattern of actual data with Benford's expected digit proportion. Various statistical tools are being used in literature for an effective analysis of data conformity and digit analysis as well. The test statistics, compared with critical values and p-values can show the degree of deviation (or conformity) to expected Benford's proportion. Most important advanced tests discussed in this study are *chi-square test*, *Kolmogorov-Smirnov test (KS)*, *Euclidean distance test*, *Joenssen's  $jp$ -square test*, *Freedman-Watson  $u$ -square test*, *Chebyshev distance test*, *Z-statistics* and *mean absolute deviation test*. Additionally, for the future research directions, it is argue that the sectoral perspective should also be considered in order to gain a thorough analysis of financial frauds in various sector of economy (Máté 2014; Máté et al 2016) and to explain the role of actual and expected differences and how their interactions might influence accountancy frauds.

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## DASHBOARD - PERFORMANCE MEASUREMENT TOOL EMPIRICAL STUDY OF THE HOSPITALITY INDUSTRY IN ROMANIA

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**Abstract:** *Accounting provides information communicated through accounting reports configured as such to be understood by the users addressed. Moreover, the purpose of accounting is to transform the information provided and the methods and tools used into an orientation tool, a "dashboard" to identify the conditions under which the economic entity operates, both at micro and macroeconomic level, and also of the internal and external factors that influence its activity. The most commonly used form of accounting reporting is the financial statements, but there are other accounting reports that voluntarily display information and which represent the main link between accounting and beneficiaries: the income and expenditure budget, the dashboard, the reporting board, the balanced scorecard, the comparative analysis (benchmarking), the auditors' report, the business plan, other reports made by other entities according to the needs of beneficiaries; Typically they are prepared by processing accounting data and contain or based on them the indicators that reflect the entity's financial and heritage can be determined. Our intention was to analyze, in the "tourism and hospitality industry" sector, the accounting reports that are most used by managers and what information should be summarized in the dashboard for an entity in the hospitality industry? To find answers to these questions, but not only, we carried out an empirical research that is based on a survey conducted between November 2012 and January 2013, the working tool being a questionnaire consisting of 38 questions given virtually and in the field to the managers in the hospitality industry in Bihor. The total population is made up of 146 entities from Bihor, in this sector, the sample consists of 91 tourism entities and the response rate was 62.33%.*

**Keywords:** *performance; dashboard; managers; hospitality industry.*

**JEL Classification:** *M40; M41.*

### Introduction

*The hospitality industry is the branch of the national economy that aims to meet the needs of tourists during their holiday or travel, first of all the need for accommodation and meals and the most enjoyable leisure time through support activities (transport and insurance, animation, Organization of conferences, souvenir shops, etc.).*

*The research is an exploratory one that aims to analyze the behavior of managers in the hospitality industry and their reasoning on different financial accounting aspects, performance analysis, but also on the synthesis and use of information in the decision-making process.*

*Our scientific approach started with the creation of a database of entities operating in this sector. Thus, 146 economic entities were authorized to carry out activities specific to the hospitality industry, which constituted the total population of our research.*

*Based on the analysis based on general descriptive statistics on general questions, I formed the profile of the manager working in this sector. He is predominantly male (50.5%), with an average age of about 40 years, older than 15 years and economist.*

### **Dashboard - a tool for measuring performance**

*Accounting provides information communicated through accounting reports configured so that it can be understood by the users for whom it is addressed. The most commonly used form of accounting reporting is financial statements, but there are other accounting reports that provide voluntary information and which are the main link between accounting and their beneficiaries: the revenue and expenditure budget; Dashboard; Reporting panel; Balanced scorecard; Benchmarking; Environmental reports; Auditors' report; Business plan; Other reports prepared by the entities, depending on the needs of the beneficiaries. Typically, they are prepared by processing the accounting data and contain or can be used to derive indicators that reflect the financial and property status of the entity.*

*The origin of the term dashboard is in automotive and aviation, its use in management and management control perfectly covers its responsibilities. The dashboard consists of a set of synthetically displayed indicators that allow the person to act quickly if problems arise. In agreement with Caraiani et al, the similarity between the dashboard of a car and the dashboard can be achieved as a management method. When a pilot is at the wheel of the car, he needs constantly information on the technical state of the vehicle in order to make decisions(Caraiani et al 2005: 428).*

In the foreign and native literature, definitions and perceptions of performance monitoring tools are numerous and misleading: **the information and signaling tool** (Elie Cohen); **Pilot tool** (Capusneanu, 2006); **Diagnostic tool and progress** (Bouquin 2001); **Dialogue and support tool** (Kerviller I and Kerviller L. 2000); **Information Collector** (Camping & Shirt 2012), a means of performance analysis or internal control (Briciu et al 2010), contributes to an improved resource allocation, increased accountability and management of performance (Miller and Cioffi, 2004). In accordance with more than one author, the dashboard is not a static representation of information, but is updated regularly (weekly, monthly, quarterly) depending on the system's capabilities, but also to meet the needs of the end user, improving understanding through the visual process, Few, 2006; Negash and Gray, 2008; Yigibasioglu and Velcu, 2011). Dashboard is a visual display tool of the most important information to reach one or more goals (Few, 2006) to reflect key performance indicators (KPIs) and key risk indicators (KRIs). According to Dilla and Steinbart (2005), the quality of value judgment is affected by the format of the display and the information that is contained in the dashboard.

### **Dashboard in the Hospitality Industry - Empirical Study**

Aware of the importance of accounting information and reports underpinning the decision-making process, we wanted to know the perception of hospitality managers about them, more specifically about the scoreboard and the information that needs to be found in it. Given that 64% of managers in our sample assert that they use daily accounting information. At the sample level, 41 out of 91, which represents 45% of managers, say they use cash flow accounting information very often in their decisions. Also, 47.25% of managers say they often use cost accounting information



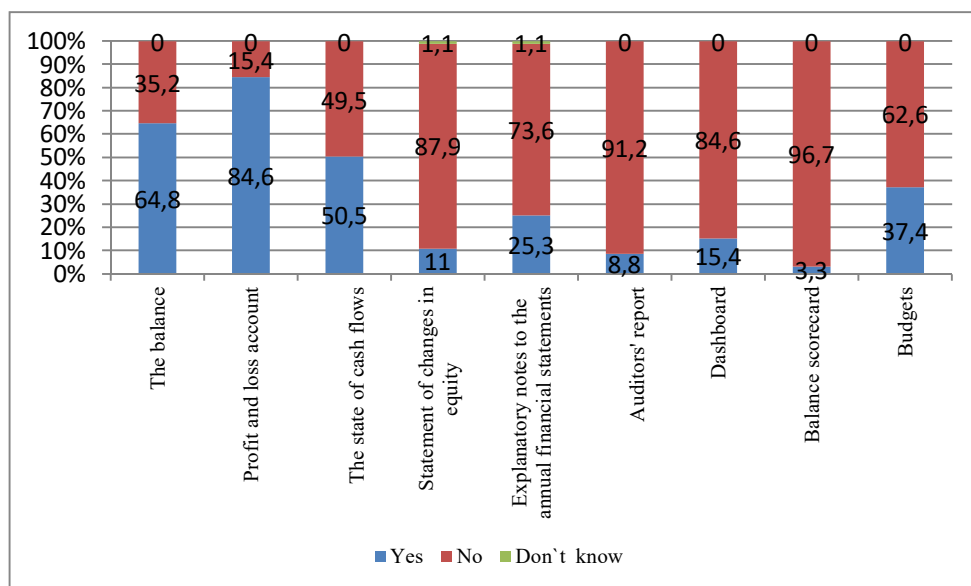
in their decisions, while 24 of them (26.37%) say they use this type of information very often.

At the sample level, 45% of managers say they often use accounting information on debts and commercial debt in their decisions, and only 2 managers have said they use information on receivables and debts rarely and very rarely. 45% of managers say they often use accounting information about results in their decisions, while 21.97% of managers use this type of information very often.

We have tried to see if these answers are also confirmed by another question in the questionnaire, namely the usefulness of the accounting reports, knowing that some of them contain only information provided by financial accounting, and others contain or may contain information provided by both financial accounting and management accounting.

This question was as follows:

*II7. What are the most frequently used accounting reports in your activity, mentioning the reports that appear in the following figure.*



**Figure 1.** Distribution of accounting reports most frequently used in the activity of managers in the sample

Source: own processing based on questionnaire responses

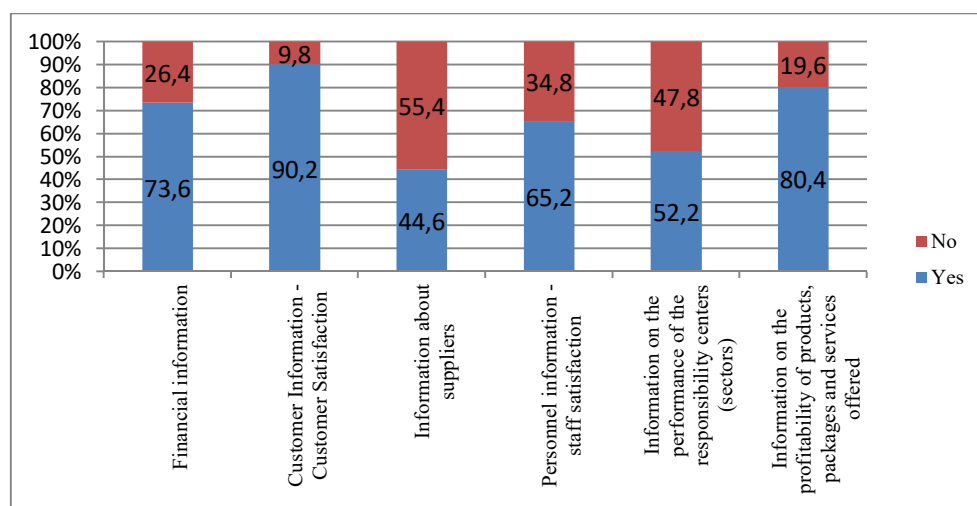
As was somewhat expected, managers in our sample use most of the information provided by financial accounting through the components of the financial statements: the Profit and Loss Account and the Balance Sheet and the least use the Scorecard Balance information. In fact, we deduced from field discussions that many managers do not know the term Balance Scorecard, and on the scoreboard we have found that there are some entities using this reporting and evaluation tool for performance but without using this term for identification.

Based on these findings in the field, another question arises, namely: are these reports frequently used in relations with third parties or are frequently used in the management process? This entanglement will be the subject of future research. Another category of questions related to measuring and performance monitoring tools. There are many such tools in the literature, the most widely used in terms of management control being the Scoreboard, Balance Scorecard and Reporting. In our questionnaire we only mentioned Scorecard Scorecard and Dashboard.

As we have already mentioned among the hospitality industry entities that made up our sample, these tools are not very well known, especially the Balance Scorecard, and are therefore even less used. Although 93% answered affirmatively to question III.18, Do you consider that the existence of a scoreboard summarizing all the information for the managerial team would be useful ?, analyzing the answers to the question about the accounting reports presented in Figure 1, we find that these two Reports are not among the most used by managers of economic entities in the sample (15.4% scoreboard and only 3.3% Balance Scorecard).

We also wanted to find out what information would be useful to provide information that would meet the needs of hospitality managers.

Figure 2 shows the distribution of answers to question III.19 *What information should be synthesized in the Dashboard for an entity in the hospitality industry?*



**Figure 2.** Distribution of responses to the question "What information should be synthesized in the dashboard for a hospitality entity?" At sample level

Source: own elaboration based on questionnaire responses

If 93% of the scoreboard was answered yes, we wanted to see what information the dashboard should contain in order to be a tool for measuring and monitoring performance with maximum utility. Managers of most entities in our sample consider that the scoreboard should contain customer satisfaction information (90.2%), respectively the return on products, packages and services offered (80.4%). Surprisingly, managers did not appear very willing and knowledgeable about staff-staff satisfaction, only 65.2% said that this information should be presented in the dashboard. Or as far as we are concerned, we are aware that employee satisfaction,

in all respects, has the direct effect of customer satisfaction, which will then be reflected positively in financial information.

Customer loyalty implies an increase in profits, which together affects the satisfaction and loyalty of employees in service companies (interconnection between customer and employee satisfaction) (Hanic and Domazet, 2011: 151). Long-term customer loyalty is the effect of providing quality services and who else does this if not the human factor whose share is very high in the hospitality industry. Managers are the least interested in supplier information.

And yet, asking who should know the information presented in the scoreboard, 20.9% of managers responded that this information should be known to all staff, and only 15.4% said they should only be presented to the general manager.

Here's how the managers in our sample answer to question III.20 on the hierarchical levels to which the information in the Dashboard should be made, the answers being presented in Table 5.67

**Table 1.** Analysis of the distribution of answers to question III.20. Use or think it would be beneficial to use the dashboard for the following hierarchical levels at the sample level

		Absolute frequent	Weight in total sample
Valid	All the staff	19	20,9%
	Operational Managers (Chiefs of Service)	3	3,3%
	Financial Manager, Operational Managers (Chiefs of Service)	1	1,1%
	General manager	14	15,4%
	General Manager, All the staff	9	9,9%
	General Manager, Operational Managers (Chiefs of Service)	2	2,2%
	General Manager, Operations managers (Chiefs of Service), All the staff	1	1,1%
	General Manager, Financial Manager	12	13,2%
	General Manager, Financial Manager, All the staff	1	1,1%
	General Manager, Financial Manager, Operational Managers (Chiefs of Service)	20	22,0%
	General Manager, Financial Manager, Operations managers (Chiefs of Service), All the staff	3	3,3%

		Absolute frequent	Weight in total sample
	General Manager, Financial Manager, Operations managers (Chiefs of Service), Staff representatives	4	4,4%
	General Manager, Financial Manager, Staff representatives, All staff	1	1,1%
	General Manager, Staff Representative	1	1,1%
	Total	91	100,0%

Source: own elaboration based on questionnaire responses

The vast majority of managers in the sample believe that using the scoreboard would be useful for the following levels: General Manager, Financial Manager, Operations Managers (Chiefs of Service).

As a result of our scientific approach, we have cost that accounting information plays an important role in the performance process, and managers in the hospitality industry give it the right weight, but it is not everything. In the hospitality industry a special role, maybe even capital, have employees that through their performance contribute to increasing customer satisfaction. We are in favor of forming an organizational culture of employees and managers as this is the "main vehicle" (Phillips P. A, 2006: 731) for the successful implementation of the medium and long-term strategy of the economic entities in the industry Hospitality and the key to increasing performance on all levels.

#### **H1: Profession and professional experience of managers influence their perception of the usefulness of the dashboard.**

The questions that we base on the validation of this hypothesis are:

*IV.1. What is your profession (tick one answer)?*

- Economist
- Engineer
- Jurist
- Other

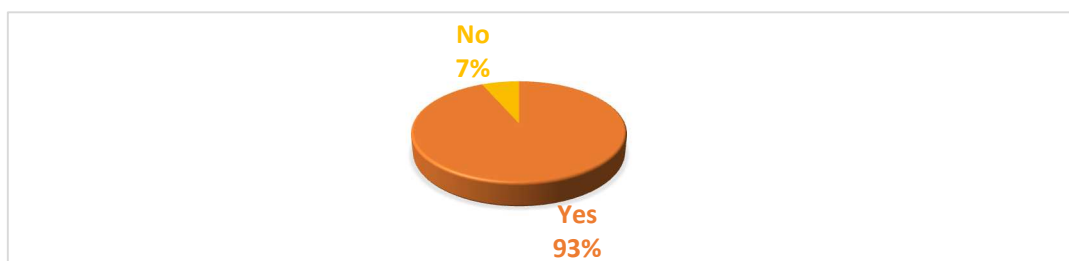
*IV.4. What is your manager experience?*

- Under 5 years
- From 10 to 15 years
- From 5 to 10 years
- Over 15 years

*III18. Do you consider that the existence of a dashboard in which to summarize all the information for the managerial team would be useful?*

The professional experience of managers can significantly influence the perception of the role and usefulness of accounting information. On this hypothesis we will

come back later to determine whether it is confirmed or not at the level of the managers in the sample. We present for the first time the distribution of answers to question III18 on the usefulness of the dashboard.



*Figure 2* Distribution of sample managers' responses to the usefulness of the dashboard

Source: own elaboration based on questionnaire responses

Most managers in the sample consider that the existence of a dashboard in which to summarize all the information for the management team would be useful.

To validate this hypothesis, I reasoned as follows:

- For questions IV1 and IV4, we will assign scores of importance to each answer, as follows: 1 point is allocated to managers who have economic training, 0 to the others. The experience is scored by 0 to 3 points, directly proportional to the seniority of the managers. We gathered the scores so obtained.

The next step in our approach to validating this research hypothesis is building the correlation table between the responses to the two variables. It is presented as in Table 2

*Table 2* Distribution of responses related to the variables used in validating the H16 hypothesis

		Score questions IV1 and IV4					Total
		0	1	2	3	4	
III18	Yes	2	23	32	14	14	85
	No	0	1	3	2	0	6
Total		2	24	35	16	14	91

Source: own elaboration based on questionnaire responses

Analyzing the distribution of responses, one can notice a very poor correlation between the answers to the two questions. Confirmation of the hypothesis is done

by the  $\chi^2$  test. Frequency table recalculated using the formula  $n_{ij} = \frac{n_{i\bullet} \cdot n_{\bullet j}}{n}$  as it follows:

Table 3 Table of recalculated frequencies associated with Table 2

		Score questions IV1 and IV4					Total
		0	1	2	3	4	
III18	Yes	1,87	22,42	32,69	14,95	13,08	85
	No	0,13	1,58	2,31	1,05	0,92	6
1Total		2	24	35	16	14	91

Source: own elaboration based on questionnaire responses

$$\chi^2_{\text{calculat}} = \sum_i \sum_j \frac{(n_{ij} - n'_{ij})^2}{n'_{ij}}$$

Using the formula the value is determined  $\chi^2_{\text{calculat}} = 2,49$ .

Because this value is greater than 0, but relatively close to it, it can be said that at the sample level, the profession and the professional experience of managers influence their perception of the usefulness of the scoreboard, but to a very small extent. In order to expand our result on the total population - all the managers in Bihor County, the following assumptions are made:

$$H_0 : \chi^2 = 0 \text{ with alternative } H_1 : \chi^2 \neq 0$$

The calculated value, 2.49, is compared to the table value, determined for 3 degrees of freedom and a probability of 95%, which in our case is 7.82. Since the calculated value is less than the table, the null hypothesis cannot be rejected.

**Conclusion: Hypothesis H1: The profession and professional experience of managers influence their perception of the usefulness of the scoreboard is not validated.**

### Conclusions

- 18.7% of managers said they were using performance monitoring tools (15.4% scoreboard and 3.3% scorecard scoreboard).
- 93% of managers have found it useful to use a dashboard as a performance measurement and monitoring tool, and the list of information it should include information about customers and financial information.
- Managers said that the scoreboard should contain customer satisfaction information (90.2%), respectively the return on products, packages and services offered (80.4%).
- Managers did not appear very willing and knowledgeable about personnel-staff satisfaction, only 65.2% said that this information should be presented in the scoreboard. As far as we are concerned, we consider that the long-term customer loyalty is the effect of providing quality services, and here the human factor, that is the employee, plays a leading role.
- 20.9% of the managers responded that the information in the scoreboard had to be known by all staff and only 15.4% said that they should only be presented to the general manager.

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# CONSIDERATIONS ON THE STRATEGY OF COMMERCIAL BANKS IN THE CONTEXT OF THE FINANCIAL SYSTEM DEVELOPMENT FOR THE PERIOD 2005-2013

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**Abstract:** *In this paper we will analyse the strategic changes for the most important banks (228 banks) within the European Union and Switzerland. The (annual) data used are taken from the Bankscope database and cover the period 2005-2013. Particular attention will be paid to analysing the structure of bank resources and placements for the period 2008-2009, in order to capture and understand changes in the assets / liabilities of European banks as a result of the financial crisis. The analysis carried out both in the pre-crisis and post-crisis period will highlight how European banks have responded to the effects of the financial crisis, the speed with which they have adopted new business models, and the difficulties they have faced. The analysis consists of two parts, the first part deals with the similarity of banking assets and liabilities on a sample of 228 banks using the hierarchical cluster method. The second step is to analyse the evolution of the correlation between banking assets and liabilities and the mutations that emerged in the banks' strategy as a result of the economic crisis. The results obtained show that European banks are not homogeneous in terms of the balance sheet structure, but three higher homogeneous groups can be identified, which are geographically divided on the east-west axis (Western Europe - Eastern Europe ); respectively between the main two clusters which consists of Germany / UK / Finland / Italy / Denmark, on one side, and France / Spain / Portugal, on the other. Banking supervisors at European level and the ECB should take into account the high heterogeneity existing at the level of the European banking system when implementing monetary and supervisory policies. With regard to the evolution of the correlation between resources and placements, it is noted that balance sheet items consisting of mortgages, consumer, corporate or other types of credit are generally negatively correlated. At the same time, the economic crisis has led to mutations in the way banks are financed, they manifest a high preferences to attract funds from deposits (short / long term) and only as last resort from other banks.*

**Keywords:** correlation analysis; hierarchical cluster; bank strategy.

**JEL Classification:** G01; G21; C29.



## 1. Introduction

The main goal of assets and liabilities management is to achieve a level of profitability in line with the accepted risk level, this objective can also be understood as the strategic management of assets and liabilities (Rosen & Zenios, 2008) or as an cost / profit function (Kusy & Ziemba, 1986) which has as a variable the associated risk.

The profitability level within the banking system is influenced by both variables specific to the banking system and macroeconomic variables, another influence is due to the dynamics of the economic sector where commercial banks have the highest exposure (PP Athanasoglou, Brissimis, & Delis, 2008). So as a result of the legislative changes, development of securitization, implementation of asset-liabilities management techniques, the dependence between bank assets and liabilities is in a continuous change.

The quantification of these dependencies both at bank level and at the level of the whole banking system leads to a better understanding of the way banks are allocating their resources. We obtain a more comprehensive understanding of commercial bank behavior and channel of shocks transmission within the system banking.

Measuring the dependence between bank assets and liabilities must take into account the role of asset and liabilities management techniques in meeting the bank's profitability targets. The measurement of banking performance is made using the following indicators (Heffernan & Fu, 2010; Hughes & Mester, 2008; Kosmidou, Pasiouras, & Floropoulos, 2004) profitability indicators, economic value added, net interest margin, Sharpe ratio, Robin ratio, Income to cost ratio, liquidity ratios, reserves for loans, Equity/Assets ratio, Total assets.

Another important factor influencing the balance sheet structure is the structure of capital and the financing mix (capital, debts and hybrid instruments) used by banks. The theory of Pecking order developed by (Myers & Majluf, 1984, p. 581) shows the funding preferences of the companies:

- First of all is the financing from own sources, this type of financing is possible only if the company is profitable;
- If external financing is needed then companies use their debts, hybrid instruments and finally only as a last resort they attract new capital.

Because of the informational asymmetry (Myers & Majluf, 1984) investors are unable to know all the aspects of how a company operates and due to this fact the raising capital through new shares is understood by investors as a signal that managers lack confidence in the company value.

The studies that analyze the financing mechanism of banks (Baltacı & Ayaydın, 2014; Deyoung & Yom, 2008; Distinguin, Roulet, & Tarazi, 2013; Gu, de Mooij, & Poghosyan, 2014; Heider & Gropp, 2008; Hendricks, Jed, Williams, & Shakespeare, 2010; Pereira & Saito, 2011) show that there is a pecking order for the financing of activity for banks, the most used one is through own resources, followed by debts, hybrid instruments and equity; the equity being the most expensive financing source for banks.

The banking performance depends on a number of different factors (Alexiou & Sofoklis, 2009; Panayiotis Athanasoglou, Delis, & Staikouras, 2006; Demirgüç-Kunt & Huizinga, 1999; Dietrich & Wanzenried, 2011; Kosmidou & Zopounidis, 2008;

Olson & Zoubi, 2011; Trenca, Zapodeanu, & Cociuba, 2015; Trujillo-Ponce, 2013) asset structure, assets quality. Bank capitalization, banks financial structure, the size and capital of banks, diversification of revenues.

(Hester & Zoellner, 1966) analyzes the impact of the structure of assets and liabilities on bank profitability using linear regression, (Crum, Lund, & Van Auken, 1987; Stowe, Watson, & Robertson, 1980) study the structure of assets and liabilities and the relationships established between them in non-financial companies; both papers found that there is a complex relationships established between the various balance sheet items.

The canonical analysis method is also applied in the analysis of the banking assets / liabilities structure by (Simonson, Stowe, & Watson, 1983) which shows that unlike the regression method through the canonical analysis method it is possible to capture the links between two sets of variables, the method of canonical analysis being superior when dealing with the complexity of financial institutions.

The structure of bank assets and liabilities has an important impact on the banks profitability (Deyoung & Yom, 2008; Memmel & Schertler, 2012). The results show that there is a clear differences in the structure of the banks balance sheet according to the size of the assets held by banks, with an an impact on the profitability of banks.

The canonical analysis was used on studies regarding companies structure by (Auken & Lema, 2003; Van Auken, Doran, & Yoon, 1993); for the Spanish companies (Auken & Lema, 2003) found that long-term debt in one of the most important process of risk management. (Helleloid & Sheikholeslami, 1996) analyzes the systemic relationship between the subsidiaries of multinational US companies, using the canonical correlation as a method of capturing these relationships, the results of studies show the links between income levels in other countries and investments made abroad, the use of long-term debts / short for making investments at the expense of using equity. (Van Auken et al., 1993) uses the canonical correlation to capture interdependencies in the Korean companies' balance sheet structure, observing that there are similar interdependencies in the balance sheet structure of Korean companies with the balance sheet structure of US companies.

The canonical correlation was used to capture the impact of the financial reforms on the balance structure of the rural banks in Ghana (Obben, 1992), also (Obben & Shanmugam, 1993) in order to compare the balance sheet structure of banks, financial institutions and Malaysian companies uses the same method: canonical analysis. (Jang & Ryu, 2006; Jang, Tang, & Chen, 2008) analyzes the interdependencies between the assets and liabilities of companies in the hospitality sector, observing the existence of the maturity correlation phenomenon between assets/liabilities, the companies from the hospitality sector are using long-term assets as collateral for term loans long, also it can be observed the use of a mix of liquidity and capital for risk management.

The relationships between the balance-sheet positions of banks are analyzed by (Camarero & Tamarit, 1995) for Spanish savings banks, while (Bagchi, 2012) studies the impact of banking regulations on the structure of assets and liabilities in the banking sector in India, also for Indian banking system (Dash & Pathak, 2009) notes that there is a strong correlation between liquid assets and deposits. (Haslem, Scheraga, & Bedingfield, 1992) uses canonical analysis of the financial statements

of 176 banks in the United States observing a division between foreign and domestic assets/liabilities matching strategies.

Analyzing the structure of assets and liabilities (Deyoung & Yom, 2008, p. 3) on the US banks for the period 1990-2005 they observe that the link between assets and liabilities is stronger in the case of large banks. Canonical analysis reveals strong links between short-term loans and interbank lending, while long-term loans are strongly correlated with deposits; another important conclusion is that there is a decrease in the link between assets and liabilities for the period 1990-2005 for all analyzed banks, especially in the case of large banks. This decrease in the correlation between assets and liabilities for large banks is explained by an easier access to newly instruments of risk management, large banks are part of the consolidation process of the banking system thus benefiting from a decrease in risk; the share of non-interest income in large banks is higher than in the case of medium / small banks, this also has led to a reduction in risk (especially default and interest).

(Deyoung & Yom, 2008, p. 4) shows that there is a convergence process between the correlation of assets and liabilities for all types of analyzed banks irrespective of their size; the financing and investment process of banks have become less correlated over time as a result of financial deregulation, increased use of innovations in risk management, product diversification and access to different markets. Thus, the banks analyzed by the authors have a behavior that increasingly respects the theory of financial structure irrelevance (Modigliani & Miller, 1958), ie an increasing independence between resources and placements.

The relationship between the structure of assets and bank liabilities in German banks is studied by (Memmel & Schertler, 2012), the study conclusions being that there is a decline in the dependency between assets and liabilities for the 1994-2007 period for German banks, regardless of their specificity: commercial, savings or cooperative banks. The decrease in the dependency between resources and investments in German banks (Memmel & Schertler, 2012, p. 12) is mainly due to a decrease in the correlation between long-term loans and short-term deposits, while the dependency of term deposits long and long-term loans remain unchanged.

Banks perform three important transformation functions (Entrop, Memmel, Ruprecht, & Wilkens, 2011, p. 1): maturity, liquidity and risk; the ultimate goal being to maximize profitability. In general (Entrop et al., 2011) banks perform these three functions through the allocation of assets, which generates a strong correlation between resources and placements, but with the increasing use of risk transfer instruments banks can reduce dependencies between assets and liabilities; an important role is played by the ALM (assets/liabilities management).

## 2. Methodology

The fundamental objective of this study is to analyze the interdependence between bank assets and liabilities for the 2005-2013 period, this study will:

- analyze the degree of correlation between resources and placements;
- identify the asset / liability positions that contribute most to reducing / increasing the correlation between resources and placements.

The sample of banks analyzed comprises of the main banks (228 banks) of the European Union and Switzerland. The data used (annual) are taken from the Bankscope database and comprise the period 2005-2013, the structure of the

sample used was determined by the availability of data within the Bankscope database.

The study is cross-sectional and the method used is canonical analysis; using canonical analysis can not only capture the bi-varied correlation but also the interdependencies between the groups of variables. The method of canonical correlation is appropriate to capturing the complexity of financial institutions (Simonson et al., 1983), by using the method of canonical correlation we can ascertain the links between the banks assets and liabilities.

The classification of assets and liabilities is made according to the methodology used by (Deyoung & Yom, 2008; Memmel & Schertler, 2012), bank assets / liabilities were classified into eight groups and balance sheet positions are calculated as a percentage of assets (%).

Out of the eight balance sheet assets / liabilities positions in order to eliminate multicollinearity the positions "Other assets" and "Other liabilities" were excluded from the analysis. The decision to exclude them is based on the following:

- the equality between liabilities and assets in the balance sheet shows that there is a linear combination of assets that is related to a linear combination of liabilities;
- the methodology used for calculating balance sheet items of assets and liabilities used in the paper, the items "Other assets" and "Other liabilities" were calculated as the difference between Total assets (liabilities) and the remaining assets (liabilities); so essentially "other assets" and "other liabilities" are a linear combination of the other asset / liability variables.

The two groups of variables will consist of  
assets

$$A = [A_1, A_2, \dots, A_7]$$

and liabilities

$$P = [P_1, P_2, \dots, P_7]$$

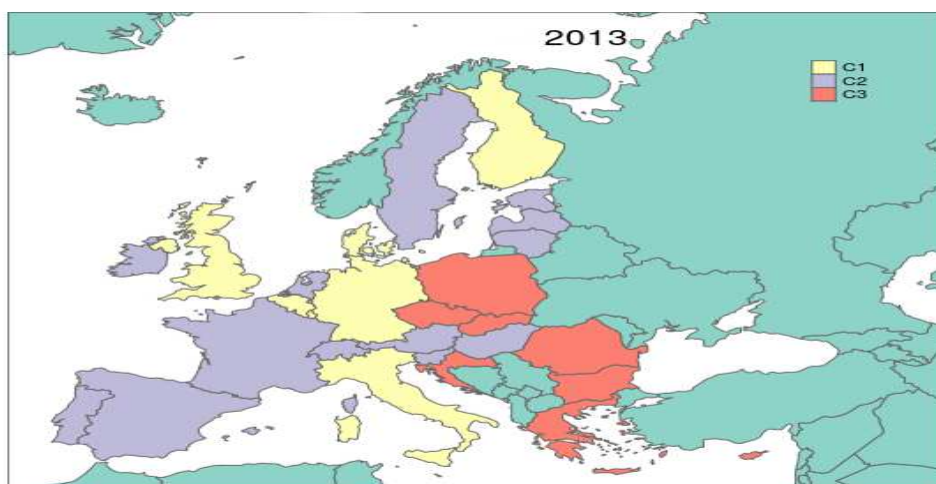
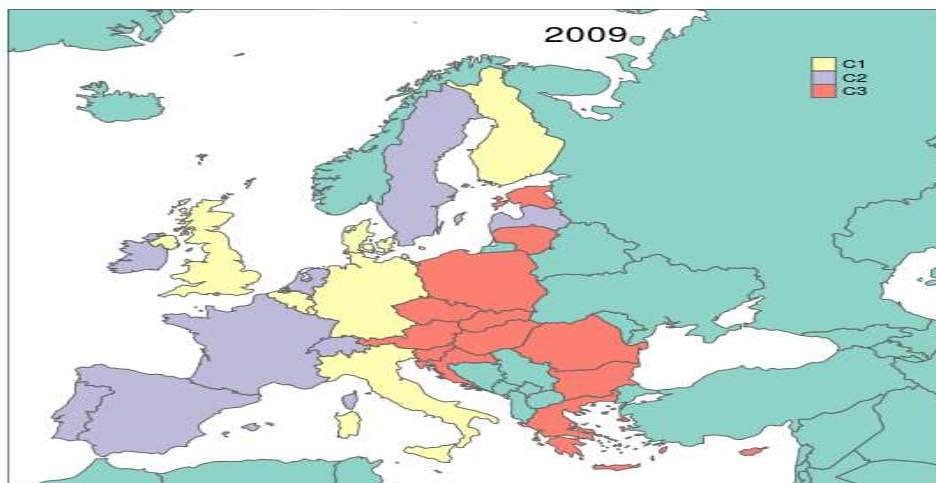
Each of them having 7 variables, based on which we will build linear combinations to obtain canonical correlation coefficients.

### 3. Results

Cluster analysis is a practical method for analysing differences between data series, the objective of cluster analysis being the grouping of objects (observations or series) analysed in groups according to a certain measure of distance, is a technique for classifying the analysed objects in homogeneous groups.

In order to capture the homogeneity of the banking systems in the analysed countries, the hierarchical analysis was used on cross-sectional data from 2005, 2009 and 2013; the measure used to capture the similarities was the Euclidean distance. The classification was made using the asset / liability balance sheet positions, respectively the eight groups of assets / liabilities.

Using the hierarchical analysis on the 29 countries, based on the structure of bank resources and placements, three clusters were identified (Fig. 1):



- 5.1 cluster 1 consists of Malta, Denmark, Italy, Finland, Great Britain, Germany, Belgium and Luxembourg. In the case of this cluster, no change in the composition was observed for the analyzed period, the cluster component 1 being identical for the analyzed periods (2005, 2009, 2013);
- 5.2 cluster 2 is mainly formed by banks from France, Spain, the Netherlands, Sweden, Portugal, Ireland, Latvia, Switzerland, respectively in 2013 Austria, Estonia, Lithuania, Hungary, Slovenia. In 2013 this cluster shows an increase in the number of countries from 9 (in 2005) to 13 in 2013.
- 5.3 Cluster 3 is mainly comprised of Central and Southeast European countries: Bulgaria, Greece, Croatia, Romania, Poland, Slovakia, Cyprus, Czech Republic plus Austria (2009), Estonia (2005, 2009), Lithuania (2009), Hungary (2005, 2009), Slovenia (2005, 2009). It should be noted that banks from Austria, Estonia, Lithuania, Hungary and Slovenia are migrating from cluster 2 in cluster 3 in 2013, this could be explained by the major influence of Austrian capital on the banking systems in the respective countries.

From the point of view of the geographic distribution of the clusters (Fig.1) it can be noticed that in case of clusters 1 and 2, which have the highest similarity, they comprise from most of the developed countries from Western Europe plus some Central and Baltic countries.

Significance Tests									
	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Wilks' lambda (F statistic)</b>									
1	6.71** *	6.81** *	5.58** *	8.44** *	5.82** *	7.93** *	6.23** *	6.36** *	5.16** *
<b>Pillai's trace (F statistic)</b>									
2	5.67** *	5.71** *	4.92** *	6.98** *	5.16** *	6.67** *	5.35** *	5.42** *	4.68** *
<b>Lawley-Hotelling trace (F statistic)</b>									
3	7.57** *	7.70** *	6.02** *	9.46** *	6.24** *	8.76** *	6.86** *	7.08** *	5.44** *
<b>Roy's largest root (F statistic)</b>									
4	33.77* **	33.51* **	23.03* **	35.58* **	23.28* **	31.31* **	24.91* **	29.05* **	18.01* **
The significant values of the global correlation, respectively of the F test, are denoted by ***, significant at $\alpha = 0.01$									

Tabel 1: Significance Tests of canonical correlations (own analysis)

Cluster 1 is composed of the Nordic countries, and banks from Italy and the United Kingdom; although Italy is often classified with as being part of South-West group in terms of resource / investment structure Italy has a much higher similarity to banks operating in Denmark. France, on the other hand, is found in cluster 2 alongside

Spain, Portugal, Ireland, the Netherlands, Sweden, Switzerland and some Baltic countries.

Cluster 3 it is mainly formed by banks from Central and Eastern European countries, including Greece and Cyprus. An interesting aspect of cluster 3 is given by the high similarity of banking assets / liabilities between banks in Greece and Bulgaria, the distance of this subgroup of countries is the highest relative to the rest of the cluster. Applying the canonical analysis on the analyzed sample we obtain the values of the canonical correlation coefficients: Wilks' lambda significance tests, Pillai's trace, Lawley-Hotelling trace, Roy's largest root (Table 1). The tests were used for the overall evaluation of the obtained model. As a result of the way in which the linear combinations are constructed and then the canonical variables we obtain seven canonical functions, the first canonical function has a certain level of correlation between the two linear combinations used to obtain the maximum variance between the two sets; then the residual variance unexplained by the first correlation function is then used by the second correlation function, and so on. Each canonical function, in our case from one to seven, is orthogonal with the other canonical functions obtained.

For 2005 the Wilks test  $\lambda$  value is 0.26,  $F(49, 1090.86) = 6.71$ , with  $p < 0.01$  so the model used is globally significant; using Wilks' lambda significance tests, Pillai's trace, Lawley-Hotelling trace and Roy's largest root for the entire analyzed period 2005-2013 we will reject the null hypothesis of nonexistence of a link between resources and placements at a significance threshold of 0.01. The utility of the Wilks test is given by the fact  $1 - \lambda = R^2$ , where  $R^2$  is the determination coefficient, which can be interpreted similarly to its linear regression correspondent, it shows the proportion of the common variance in the set of variables for all canonical functions (Sherry & Henson, 2005, p. 42).

For the analyzed period, the proportion of variance explained by the models is the following:

	2005	2006	2007	2008	2009	2010	2011	2012	2013
$\lambda$	0.2621	0.2577	0.3209	0.1954	0.3073	0.2127	0.2854	0.2790	0.3465
$R^2$	0.7379	0.7423	0.6791	0.8046	0.6927	0.7873	0.7146	0.7210	0.6535

Tabel 2: Evolution of explained variance

We can observe that the level of explained variance for the period 2005-2013 fluctuates between a minimum of 0.65 in 2013 and a maximum of 0.80 in 2008. The structure of the assets and liabilities of the analyzed banks have a behavior that seems to tend to respect the theory of financial structure irrelevance (Modigliani & Miller, 1958), respectively an increasing independence between resources and placements. However, the declining variation doesn't have a clear direction, in 2007 the level of the variance explained was 0.67 for 2008 the value of this indicator exceeds 0.8, so the shocks generated by the financial crisis have increased the level of the coefficient of determination. In the following year, we have a sharp drop in the determination coefficient, and in 2009 it will grow again due to the shocks within the European banking system (following the sovereign debt crisis). It follows that banks in a normal economic environment tend to reduce dependency between resources and placements. The shocks that have occurred since 2007 have led to

an increase in dependence between assets and liabilities (at least at the time of their occurrence) but have been followed by periods of reduction in these dependencies, which shows that there is an active process of reducing these dependencies through the use of risk management tools, diversification of products and access to different markets.

#### 4. Conclusion

The analysis of the structure of assets-liabilities helps us to understand the differences between performing and less performing banks, giving us important information in order to better understand how banks work and what changes occur in their structure. The results obtained show that European banks are not homogeneous in terms of their balance sheet structure, with a clear division between East-West axis.

The dependency between assets/liabilities is decreasing in the long run, in a normal economic environment bank tend to reduce the dependency between assets/liabilities. The shocks that have occurred in the period of financial crises have led to an increase in dependence between assets and liabilities, which show that banks still need to address the not only the linear correlation but also the nonlinear ones.

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**SECTION: *INTERNATIONAL BUSINESS,  
EUROPEAN INTEGRATION, FOREIGN LANGUAGES  
AND BUSINESS ENVIRONMENT***



## TEACHING BUSINESS ENGLISH COLLOCATIONS – AN INTERESTING CHALLENGE TO FACE

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**Abstract:** *We live in a fast-paced world in which good knowledge of English represents a key factor for success. The ever-growing needs for fluency in English have provided collocation the status of a particularly important aspect of the English lexical system. Being assumed that, in real life, more than 80% of what we say, write, and read is made up of collocations, our job, as teachers of English, becomes very clear: we need to teach our students Business English collocations. My experience has clearly revealed that teaching Business English collocations can be both a challenge but also a difficult subject to approach. Why? Because students learning Business English vocabulary often encounter difficulties in acquiring collocations efficiently, although they are aware of the fact that these combined words can guide them towards the useful everyday spoken Business English that native speakers use so effortlessly. The key to fluent English that sounds naturally can be a good knowledge of these typical combinations of words, known as collocations.*

**Keywords:** *Business English collocations; colligation; meta-cognitive strategy; cognitive strategy; socio-affective strategy; vocabulary acquisition.*

**JEL Classification:** Y90; Z00.

### 1. Introduction

The simple definition of communication as the transfer of information from one person to another, from the speaker to the listener, can be regarded as a more complex one if we think of the different ways in which we can communicate the subject. We all know that there are different types of communication, including verbal communication (face-to-face communication, radio, television), non-verbal communication (body language, how we dress) and written communication (books, e-mail, magazines, the Internet, etc). Being an extremely active process, communication is subject to continuous change, being a complex phenomenon in which all the factors involved form the entire image of this process. For instance, the non-verbal communication, the clarification and the listening skills are important tools which cannot be entirely isolated one from the other in effective spoken communication.

Thus, in order to achieve the transfer of information, we need the language, which is actually the basic structure that makes communication possible. It is the language that we use; the lexical system that we develop our entire life enables us to communicate what we want to communicate. There is a long list of elements that influence our choice of words, depending on our purpose and the appropriate use of language in different circumstances represents the differentiating factor between native-speakers and non-native speakers of English. Language users must know how language operates in order to use their lexical knowledge and language competence accurately. Communication does not involve only grammar and

vocabulary competence. In order to communicate efficiently we have to understand how language is structured. For native speakers of English, and not only of English, this understanding of the language structure comes naturally; native speakers simply know which words go together. But for foreign language learners, combining words that go together and using them properly represents one of the most difficult task to accomplish.

Learning a foreign language is not a simple objective to be achieved. There is a set of many competences that have to be put to work together in order to learn a foreign language. Linguists often speak about concept like communicative competence and linguistic competence but Lewis M. was the first who coined the term *collocational competence*. Heikkilä T. defined the term as follows: *“collocational competence is the ability to accurately combine chunks of language thus enabling production of fluent, accurate and stylistically appropriate speech”*.

### **1.1. Definition of collocation**

These combinations of words are called **“collocations”**. Regarding the term etymologically, “collocation” is a derivation from the Latin word “collocare” which means to place something together or to put something together. In our case, from the lexical point of view, we put words together, in a certain order to express a certain meaning. The term was first used in 1957 by J.R.Firth, and since then, the opinions regarding the meaning of this term vary although this term is very much used. For instance, Moon (1998) regards collocations as *“words having a syntagmatic and paradigmatic relation”*; Nesselhauf (2004) claims that *“collocation can be seen as a type of word combination, most commonly as one that is fixed to some degree but not completely”* – this being a phraseological approach that has been widely adopted by researchers. The *Concise Oxford Dictionary* defines the term as *“the habitual juxtaposition of a particular word with another word or words with a frequency greater than chance.”* (1999) According to Michael Lewis (2000), who can be considered the father of the lexical approach in teaching English to foreign students, *“Collocations are words that co-occur naturally in daily used language”*. F.R. Palmer is considered to be one of the pioneers in the field of collocations claiming that these words must be learnt together as chunks that allow learners to produce and process the language at a faster rate. Unlike grammatical constructions, it is their usage over time that determines which words go together and in what context.

### **1.2. Collocation versus colligation; collocation versus idiom**

The difference between collocation and colligation is pointed out very clearly by Lewis (2000), saying that *“Groups of words considered as members of word-classes related to each other in syntactic structures have been called colligations to be distinguished from collocations which refer to groups of words considered as individual lexical items irrespective of their grammatical classes and relations”*. The difference between collocation and colligation is absolutely clear – while collocation refers to the occurrence of different words in a typical word combination, colligation refers to the grammatical pattern that is constantly required by a certain word or types of words. Thus, collocations focus on lexical items occurring permanently together, while colligation refers to grammatical patterns; the grammatical words can be seen as the foundation that holds together the building that is made up of the lexical words, carrying the meaning of the message.

But we also have to make a clear distinction between combinations of words and collocations. In order to express certain ideas, we often form temporarily-made phrases, which are based on grammatical rules. For instance, we say *lend a pen* – where *lend* can be replaced with *borrow*, *buy*, and *pen* can be replaced with *book*, *magazine*. Another distinction that has to be made is between idioms and collocations. Idioms are expressions with pre-established meanings, thus they can be regarded as a type of collocations. As Sinclair (1999) says “*The principle of idiom is that a language user has available to him or her large number of semi-pre-structured phrases that constitute single choices, even though they might appear to be analyzable into single segments*”. The meaning of an idiom cannot be predicted from the meaning of the constituent elements or from the language’s grammatical rules. To sum up, not all the words that can appear together form collocations.

### 1.3. Categories of Collocations

According to Lewis (2000), there are two main categories of collocations: **lexical collocations** and **grammatical collocations**. The former category includes collocations that are formed out of lexical words only and they are more difficult for the students to be learnt, such as *set the table* (verb + noun), *fresh air* (adjective + noun); the latter category is formed out of a verb, a noun or and adjective and usually a preposition, such as *carry on* (verb + preposition), *anger at* (noun + preposition). Thus, phrasal verbs such as *look for*, *carry out*, *take up*, etc are considered to be grammatical collocations - it is the preposition that makes a collocation a grammatical one.

There are different ways of establishing the categories of collocations since there are different types of collocations, ranging from **restricted collocations**, **semi-restricted collocations** reaching the **unrestricted collocations**, all of them having some characteristic features in common. Then strength of the partnership between the words that form the collocation can be another criterion according to which collocations can be grouped. Therefore, we have **weak collocations** – collocations formed out of two common words, each of them appearing in many other combinations with other words, such as *good book*, *expensive watch*, etc; **medium collocations** – collocations which are formed with words such as *do*, *make*, *keep*, *take*, etc, e.g. *make a living*, *do the homework*, etc; **unique collocations** – collocations formed out of words that can have no other possible collocation. Hill gives the example *to shrug one’s shoulder*, since the verb to shrug cannot appear with another noun except shoulder. Unique collocations are also called **strong collocations**; their strength is not given by the frequency of their occurrence but of the fact that they are formed of words which do not go together with other ones. Palmer (1984) argues that not all the words that frequently appear together must form a collocation – for instance, *teacher* and *school* are two words that often occur in the same sentence but in *a teacher works in a school* they do not form a reliable collocation. The reason for this may be the fact that both words can be found in stronger collocations with other words. Moreover, there is a distance rule that must be taken into consideration in order to form a collocation – rule that is not obeyed in our example.

According to Lewis (2000) and McCarthy and O’Dell (2005), the most common patterns of word groups that form a collocation are the following:

**Table 1:** Collocation's Patterns according to Lewis M. (2000)

<b>ADJECTIVE + NOUN</b>	rainy day, difficult decision
<b>VERB + NOUN</b>	learn a language, submit a report
<b>NOUN + NOUN</b>	language school, radio station
<b>VERB + ADVERB</b>	speak fluently, examine thoroughly
<b>ADVERB + ADJECTIVE</b>	quite usual, extremely inconvenient
<b>VERB + ADJECTIVE + NOUN</b>	revise the original plan
<b>NOUN + VERB</b>	the fog closed in

As we can notice in the examples given above, there are collocations that contain articles and prepositions. Collocations are known to be combinations of lexical words that go together, so we will concentrate more on collocations based on words that are nouns, verbs, adjectives, adverbs and the way they can be put together in order to form a collocation. But sometimes these words can be separated by other words - lexical or grammatical, one or more - these collocations being called **split collocations**. For example, "learn a language", in a certain context can become more complex, like "learn a foreign language" or even "learn one of the most difficult foreign languages in the world". Thus, it is important to draw our students' attention to these types of split collocations, make them aware of their existence. In our opinion, the best way of doing this is to provide them a text containing a lot of split collocations, and the task should be to find them and explain them.

## 2. Why do we have to teach collocations?

*"The ability to deploy a wide range of lexical chunks both accurately and appropriately is probably what most distinguishes advanced learners from intermediate ones."* says Thornbury (2002). For many years the importance of teaching collocations, in terms of increasing students' fluency in English, has been neglected. However, in 2000, Lewis M. stated the importance of collocations in fluency, arguing that *"Collocations will become so central to everyday teaching that we will wonder whatever took up so much of our time before"*. The lexical phrases that are prefabricated and stored in the memory of the native speakers give them fluency. So, the main purpose of a teacher should be teaching students how to combine words they already know rather than teach them more and more words, if their target is to bring them up to native speakers' level. As Ellis claims *"Speaking natively is speaking idiomatically using frequent and familiar collocations, and the job of the language learner is to learn these familiar word sequences. That native speakers have done this is demonstrated not only by the frequency of these collocations in the language, but also by the fact that conversational speech is broken into 'fluent units' of complete grammatical clauses of four to ten words, uttered at or faster than normal rates of articulation."* A native speaker's active vocabulary is made up of 2000 words, which is a small number if we consider the fact that we are talking about active vocabulary. An intermediate student's vocabulary is made up of the same number of words. The collocations made up out of those 2000 words by the native speaker makes the difference between that person and the intermediate level student. So, in order for our students to sound fluent, it is necessary to teach them collocations. The more collocations they know, the more fluent they sound. Another advantage in knowing a lot of collocations is the fact that



they can clarify the meaning of a word. If we take as an example the verb “to catch”, the first thing that comes to mind is “to catch a ball”. But the collocations that are formed with this verb – *to catch a cold*, *to catch the bus* – reveal the students the diversity in meaning of this verb. When forming a collocation, the verbs which bear little or no resemblance at all to the original meaning are called de-lexicalized verbs. Such examples are verbs like *to take*, *to look*, *to put*, *to turn*, etc. The students’ speaking, but also their writing, will be more meaningful, more accurate and more fluent if they know the most common collocations based on these very much used verbs. And we say the most common, since the English language contains hundreds of thousands of collocations. The examining boards have clearly stated the fact that collocations represent an important element in assessing a student’s proficiency. This is the reason why the Cambridge First Certificate (FCE), Certificate for Advanced English (CAE) and Proficiency (CPE) test collocations very seriously.

### **2.1. The challenge of teaching Business English collocations**

As far as I have noticed, both from my teaching business English and from my own learning, for most learners, collocations do represent a difficult task to achieve. Acceptable combinations of words do not have a rule to be used as guidance. So, this is why this task is so difficult. In other words, the fact that there is a huge number of collocations in the English language makes things more difficult for a teacher, when taking into account the fact that collocations do not follow a rule in order to be formed. This is the reason why collocations often represent a source of error in our students’ writing as well as speaking. Therefore, our role is to make the students understand the idea of collocations and to persuade them to make up lexical structures mentally, in order to be used in speaking and writing. But when thinking of the de-lexicalized verbs *to do* and *to make*, this is quite challenging since there is little difference between the two of them, leading to an incorrect collocations. For example, students tend to say *do mistakes* than *make mistakes*. Thus, in order to achieve collocation competence, we have to design the instruction to the students’ needs, helping them to avoid disparity.

### **2.2. Teaching Procedures**

As far as I have noticed in my classes, I completely agree with Hill (1999) who claims that most students with rich vocabulary and good grammar encounter fluency problems because of collocations. Therefore, a good approach to this problem could be to introduce the idea of collocations at an early level of English in order to make the students be aware of them and to adopt learning strategies that constantly remind them of the collocations’ existence. This can be achieved by **highlighting** since we all know that learning depends on noticing. Reformulating or restructuring can be a good way of improving the students’ linguistic competence. In teaching collocations, noticing can represent an advantage that the teacher can benefit from, by drawing the students’ attention to words that are always found together, coloring them, underlining them, writing them in italics or in bold. The learners’ progress in speaking and writing is noticeable when they get used to see and sense the words that go together. As Lewis M. claims, “*The reason so many students are not making any perceived progress is simply because they have not been trained to notice which words go with which. They may know a lot of individual words which they struggle to use, along with their grammatical knowledge, but they lack the ability to use those*

*words in a range of collocations which pack more meaning into what they say or write."*

Another procedure in teaching collocations can be a correlation between vocabulary knowledge and **reading** comprehension, meaning enlarging vocabulary by reading. But this method can be ineffective when the reader's attention is not drawn upon the meaning of the collocations but on the plot. The teacher has to draw the attention of the students to the way in which a word collocates, the guessing of the meaning, from the context, is not such an easy task to do. So, we have to encourage our students to read as much as possible since reading is a wonderful source of learning collocations in context.

Besides reading, solving **vocabulary exercises** can be another valuable source of developing students' knowledge on collocations. The majority of students resent making exercises preferring to speak and write. However, the task of correlating adjectives with adverbs and then filling in a text with the resulting collocations can be an interesting and challenging activity for the students. Also, learning collocations through error correction has proved to be a useful method. Thus, students are asked to correct the mistakes in the sentences containing a collocation.

As a conclusion, there are some ideas that the teacher should take into account, when teaching collocations:

- explaining the different types of the collocations (noun+noun, adverb+adjective, verb+noun, noun+verb);
- analyzing the type of collocation;
- understanding the nature of the collocation.

Regardless of the method the teacher approaches, the best way the students will acquire the use of the collocations is by direct exposure to the spoken or the written language.

### **2.3. Activities in Teaching Collocations**

In the following lines of the present paper, we will present different activities that can be approached by the teacher in teaching collocations. When teaching Business English, the activities we develop in our classes must be interesting, challenging and useful in order to draw the attention of the students and to achieve the desired result. Activities must be supported by materials which provide a valuable learning tool as long as they are adapted to the students' needs. Nunan D. (1998) emphasizes their importance claiming that *"materials are, in fact, an essential element within the curriculum, and do more than simply lubricate the wheels of learning. At their best they provide concrete models of desirable classroom practice, they act as curriculum models, and at their very best they fulfill a teacher development role. Good materials also provide models for teachers to follow in developing their own materials."*

#### **2.3.1. Collocate Search**

This is a simple activity which can be adapted to the level of the students. In this activity, the teacher provides the students a text, gives them keywords and asks them to find the words that go with them. The students can work either individually or in groups; the activity can be presented as a race, to see who can find more collocates. After that, the students must classify them according to their type: Adverb+Adjective, Noun+Noun, Verb+Noun, etc.

### **2.3.2. Phrase Match**

For this activity the teacher provides several collocations from a reading, divides them into two columns and the students are supposed to match one half with the other half in order to form a collocation.

### **2.3.3. Find a better word**

The practice of finding a better word combination for a given context is extremely useful if we want to enlarge our students' productive vocabulary. In this respect, the students are given a certain collocation and they are supposed to find its equivalent that fits in the context, for example, using a more descriptive adjective.

### **2.3.4. Reconstructing a text**

During this activity the students are supposed to notice the most important collocations in a text and to reconstruct the text using their findings. In this respect, the teacher provides the students a text; they are supposed to read the text and find, individually, the most important collocations in meaning. The text is taken away from them and they are asked to compare the list of their collocations with the list of their colleague. If there are differences, the students are asked to explain why they consider a certain collocation important. After having done this, the students are asked to reconstruct the text, in writing, using the found collocations.

### **2.3.5. The teacher's role**

In teaching collocations, there are several sources a teacher can rely on, such as dictionaries, textbooks, the Internet, etc. Regardless the resource used, the teacher has to adapt the level of the exercises to the students' level, needs and motivation. By rising the students' awareness of the collocations' existence the teacher helps them understand the use of the word, the collocations it can make and when we can use the collocation. In other words, the role of the teacher is extremely important since he/she corrects the students' work being a feedback provider and also having the responsibility of directing the students' attention towards collocations and building the awareness of the students' to these prefabricated lexical chunks. Willis D. (1998) stated that *"We hear more and more frequently nowadays that the role of the teacher is not so much to teach as to manage learning - to create an environment in which learners can operate effectively. Sometimes this is taken further, and the job of the teacher is to help learners manage their own learning. This is the teacher helping learners to discover for themselves the best and most effective way for them to learn."*

## **3. Conclusions**

There are hundreds of word combinations in English, words that collocate, words that "go" together, combinations that make the language sound more fluent. For a teacher of Business English, it is absolutely impossible to teach them all and it's pointless to set this as a target. The purpose of studying collocations is not to learn specific collocations but to understand the mechanism that leads to the formation of these collocations.

The concept of words collocations must be studied in certain contexts, these being the key factors in studying individual words. Thus, collocations have to be taught in the wider situational context they appear in. When talking about collocations, the

responsibility of a teacher is to make the students aware of them, to highlight them in a certain contexts, help the students keep the collocations in mind and after that to help them overcome miscollocations. As far as I have noticed during my teaching activity, students often mismatch 90% of the collocations because of the fact that collocations cannot be explained since they do not follow a certain pattern and the students lack frequency in their usage. A native speaker would produce the language in a different way compared to a non-native speaker, although the latter one can communicate the meaning. This is the result of the fact that students do not use easily collocations since they do not find them at hand.

In order to overcome this problem, teachers must be aware of the fact that students need to record vocabulary, to use the new terms and then to reactivate the already known words that can collocate with the new ones. Word trees, mind maps and collocational tables can be useful in guiding the students to provide accurate language. Besides, students must be urged to use collocation dictionaries as they enrich the vocabulary, leading to writing proficiency.

Thus, it is important for the teacher to put a stress on collocations since all of us have experienced students with beautiful ideas losing marks because of the wrong use of collocations.

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## ACCOUNTING FOR GROWTH: COMPARING ECONOMIC SECTORS IN THE UAE.

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**Abstract:** *UAE occupied an important position not only in the Arab world, but even in the worldwide economy. The country took a main oil producer and a business location hub with short duration of establishment as a country that consisted of seven emirates. Referable to the fluctuating of oil price, the country employed a strategy to diversify its economy to avoid the instability of income from oil revenue. The question was analyzed here what factor of production was the primary contributor to the growth in the concept of sectoral approach according to the UN. The purposed of this study to analyze the UAE's economy in perspective of sectoral approach from 1990 to 2015, that divided in three sectors such the primary sector, the manufacturing sector, and the service sector. The growth accounting used as a model to explain the growth. The methodology applied was a quantitative method. The data were gathered from the country statistics center, which in term employed empirical study. The empirical study resulted that the country shifted from agriculture to service and industry since 2000. The contribution share from the labor input was the main factor that contributed significantly to the growth of each sector specifically from 1990-2015, where were deserved 70%, 86%, and 62% to the primary, the manufacturing, and the service sectors, respectively. While, the contribution growth due to the capital were 24%, 45%, and 49%, for the primary, the manufacture, and the service sectors, respectively. While in contrast, the share of growth due to the TFP was negative in the manufacturing and the service sectors which were -31% and -12%, respectively, where unlike in the primary sector was 6% from 1990-2015. But in general, the sector output was obtained of the service sector was deserved the highest annual mean growth rate about 8.37%, which accompany by the manufacturing sector about 6.88%.*

**Keywords:** *Growth accounting; Productivity; TFP; UAE.*

**JEL Classification:** *C23; E23; E24.*

### 1. Introduction

The UAE is situated on the Arabian Peninsula and it is a portion of the Gulf Corporation Council (GCC) states. The UAE was established on the 2nd of December, 1971 and consisting of seven emirates are Abu Dhabi, Dubai, Sharjah, Fujairah, Umm Al-Quwain, Ras Al-Khaimah, and Ajman. It has a total area of approximately 83,600 sq. km (Yearbook, 2013). According to yearbook (2012) the UAE gained high reputation worldwide by achieving excellence in different areas such as technology, communication, science, launching aerospace satellites, aviation industry, manufacturing industry, infrastructure, tourist, financial markets, economic governance, and even in energy such as clear energy plants.

The UAE' economy has shifted from a low income based economy of fishing and pearling together with some agriculture to an oil-based high income economy within

the last four decades. The UAE has been considered one of the major ten top oil producers and reservoirs in the world (BP, 2015). However, the UAE adapted diversification strategy to lessen its reliance on oil income and focus on different sectors of the economy.

Given the previous decades to present, it can be seen that the UAE has achieved positive result by diversifying its economy. The country witnessed a great output of prosperity and welfare leading to growth. The UAE today is considered as a major financial hub in the region, and a center of international trading. Since the establishment of the UAE in the year 1971, its economic expansion was admired by hitting 200 times (UAE, 2013). In addition, the UAE is considered the second largest economy after Saudi Arabia in the Arab world and accounted for more than a fourth of total GCC's GDP in year 2012. Moreover, it accounted for nearly 14% of the total output (GDP) of the nations in the region (North Africa and Middle East). In sum, the diversification efforts have gained its way by strong the economy, which is driven by services, real estate, and infrastructure spending (UAE, 2013).

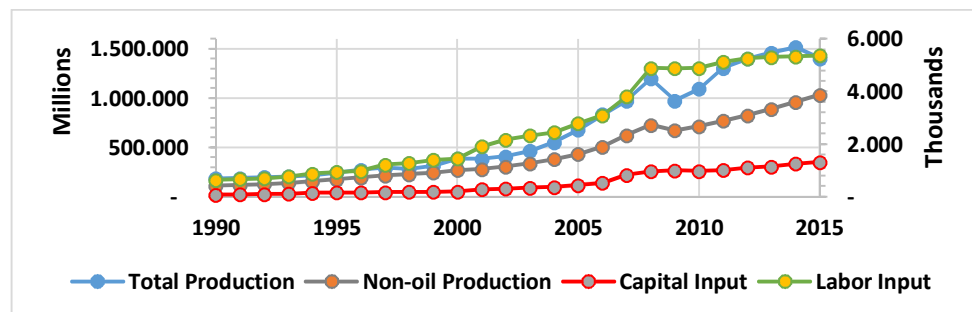
The purpose of this study is to understand the extend between the share of contribution due to factors of production and annual average growth into sectoral approach in the UAE, specifically after the transition of economy to diversify income. Thus, the question of this study is, which are the main factor that role the growth of UAE's economy in sectoral approach according to United Nation (UN) classification. The study is structured into sections. Section (1) presents literature reviews of the productivity and its measurement, section (2), demonstrates the source of divisions of the economy, data obtained, and methodology employed, section (3), presented the empirical results of three divided sectors by using the growth accounting model from 1990-2015 divided into periods (1990-2000, 2000-2010, and 2010-2015) to understand the change happened in growth of factors, and the last section (4) demonstrates the results. In general, the growth was related mostly to the increase in number of workers, unlike the improvement in TFP.

## **2. Productivity**

The productivity can be identified as the relationship between inputs to output (Shebeb, 2011). Productivity is considered one of the most important measurement that measures economic performance, which is measured by the ratio of the total output to the weighted average of inputs (Samuelson & Nordhaus, 2010). Productivity has been used for long time to measure economic performance. By use of productivity as the measure of economic performance, high productivity has been identified as a sign of economic competitiveness and efficiency in its production cycle, while low productivity has been always affiliated with a low power to produce and service leading to weak trend of economic growth (Shebeb, 2000). There are many different types for measuring productivity, such single factor productivity that measures output to one factor of inputs and multifactor productivity (MFP), which calculates by dividing output to multifactor of inputs (OECD, 2001). The decision for the measurement method to any type is mostly based on its purpose and availability of data. Labor productivity, capital productivity, and multifactor productivity (MFP) are types of productivity measurements. MFP productivity is calculated by dividing output to all factors of input (labor, capital, and materials), the labor productivity measures the per unit produced by labor in such working hours, and the capital productivity is either produced by output or capital for per worker.

The measurement of economic productivity that been linked with growth accounting framework and rooted with production theory is back to the work of Jan Tinbergen (1942), and Robert Solow (1956) because of their formulating framework. Since that time, many major contributions have been done by researchers to analyze the phenomenon of economic growth and its factors. Today, as a result, the production, theoretical approach to measure the productivity offers a consistent roadmap (OECD, 2001). A production function is a mathematical formula which puts in relation the output obtained and the sum of the production factors such as capital, labor, and technology. The growth corresponds to the growth in the production obtained by the simple increase in the quantity of factors of productions. Hence, the production of goods and services is due to combinations of factors of production (Miles, et al., 2012; Olah & Pakurár, 2013). In terms of industry output, the growth accounting techniques help to examine the rate of change for combined factors. Production factors are also referred to as factors which have been used to measure the productivity of countries' economies (Nafziger, 2006; O'Mahony & Timmer, 2009). There have been various forms of productivity measures all aimed at ensuring efficiency in the way economy converts input to output by the use of the available resources. Thus, the growth accounting approach is used to analyze the three main divisions (primary, manufacture, and service sectors) of UAE's economy as explained in data and methodology part.

Just like other developing countries, the UAE has come up with strategies to aim at improving national productive capacity as a way of improving its economic development (IMF, 2015). This has led to sustainable economic development in the country that has reduced its reliance on oil as the major contributor of the nation's GDP. Figure 1 shows the moving trend of total production (GDP), non-oil production, capital input, and labor input from year 1990 to 2015. The inputs such as labor and capital indicate a sharp rise from 1990-2015. However, due to the decline in world oil price after 2007 the country's total production expresses a downward trend. Although, the descent of the total production, the production of non-oil sector improved towards the upside indicating the success of the strategy in the UAE to reduce dependence on oil revenues.



**Figure 1.** Total Production and Inputs Moving Trend (1990-2015).

Source: (FCSA, 2016).

### 3. Data and Methodology

Economic sectoral approach as the purpose of this study was divided into three divisions like the primary sector, the manufacture sector, and the service sector. The economic sectoral disaggregation is classified according to the international



standard industrial classification (ISIC) issued by United Nations (UN) in year 2008. These sectors are agriculture, livestock and fishing, mining and quarrying, manufacturing industries, electricity, gas and water, construction, wholesale, retail trade and repairing services, restaurants and hotels, transport, storage and communication, real estate and business services, social and personal services, the financial corporations sector, government services sector (Nations, 2008). This part of the paper considers the three major sectors as traditionally divided by United Nations and World Bank to three sectors (Bosworth & Collins, 2008). The primary sector is composed of agriculture, fishing, and livestock, the manufacture sector is composed of manufacturing, mining, construction, and utilities, and the last one is the service sector that includes the rest of economic divisions, which provides intangible products.

Three main data has been collected to study by economic sectoral approach. The total output expressed by GDP for each division of the economic sector, capital accumulation, and labor were sourced from UAE Federal Competitiveness and Statistics Authority (FCSA), except the data from 2011-2015 for labor, which was estimated by researchers based on two assumptions as follow:

- Taken the year 2010 as a basis to generate the percentage of contribution of the number of workers of any sector for next year.
- Presumed the number of workers in a certain percentage of the population according to previous years' data.

The UAE's natural population of which the majority are foreigners coming into the country through a sponsoring system introduced by UAE's citizens in term to occupy an open job. So, the UAE has a unique characteristic, the unemployment rate is very low and the UAE's citizens make up around 15% of the total population and 85% are immigrants (WB, 2016). Thus, the population data were taken from World Bank (in the absence of the state's data), then generated the changed ratios from year 2009 to 2010 and these ratios were implemented by adding in sequence to the population of each year 2011, 2012, 2013, 2014, and 2015. The author believed that the most can be used.

In 1957, Robert Solow was the initiative to propose a formal model of growth that put the role of the factors of production on productivity (Solow, 1957). This model (1) is grounded on a production function of two factors: the labor and capital. The production (Y) results therefore exclusively for the implementation of the combination of a certain quantity of capital (K) and labor (L). The third factor of production that has been introduced by neoclassical school (Solow, 1956) was technological progress (A), which known as "Solow residual". Solow residual is obtained as the remain of subtracting inputs from output. In general, called total factor productivity (TFP), which represents not only the technology used but also the improvements in production process, innovations, practice of management and institution, skills, etc. And according to Solow (1957) TFP is the most significant factor needed to achieve sustained economic growth in the long term.

$$Y = A(K, L) \quad (1)$$

The growth accounting tool is like the exponential growth function form, that helps to express the share contribution of factors of production (Hulten, 2010). The growth accounting framework doesn't give answers to the fundamental causes of growth, but it identifies the important sources of growth (OECD, 2001). The methodology employed in this study is quantitative and descriptive, and growth accounting framework is used to analyze the share of contribution of three inputs (capital, labor,

and TFP) in the analysis. The Cobb-Douglas production function is used to analyze the variables in long-run growth (Wolff, 1994), and also within a group of periods of time. This framework takes this form with respect of time is given:

$$Y_t = A_t K_t^\alpha L_t^{1-\alpha} \quad (2)$$

Where  $[Y_t]$ : noted as sector's output,  $[K_t]$ : represents the sector's capital stock,  $[L_t]$ : represents the sector's number of workers,  $[A_t]$ : as total factor productivity,  $[\alpha]$ : represents the capital's share,  $[1 - \alpha]$ : as labor's share, and assuming diminishing return to scale that capital's share is 0.3 and labor's share equal 0.7 (Piketty, 2014). Also, assuming competitive market, constant returns to scale, competitive market factors, and neutral technical progress (Solow, 1956). The change in output it back to the three variables, the alteration in the capital stock, change the number of workers, and improve in TFP (Wolff, 1994).

By illustrate the practice equations: for the first variable, capital, resulting from change in the current value  $K_t$  to value  $K_t + \Delta K$ , which considered an increase in change in proportional amount of capital  $\frac{\Delta K}{K_t}$ . If we apply a rule-of-thumb that capital raised to  $[\alpha]$ , which the proportional amount increase in output from the change of capital stock as equation:

$$\frac{\Delta Y}{Y_t} = \alpha \frac{\Delta K}{K_t} \quad (3)$$

For the second variable, labor, in term of an increase in labor from  $L_t$  to a value  $L_t + \Delta L$  as proportional amount  $\Delta L/L$ . In labor variable raised to  $[1 - \alpha]$ , so can discover the amount increase in output because of change in labor is:

$$\frac{\Delta Y}{Y_t} = (1 - \alpha) \frac{\Delta L}{L_t} \quad (4)$$

Change in TFP as third variable, in effect of change in output because change in this variable. Any proportional amount increase will produce the same amount in output:

$$\frac{\Delta Y}{Y_t} = \frac{\Delta A}{A_t} \quad (5)$$

Therefore, if considering all three variables changing in practice so including equation (3), (4), and (5), then the proportional growth rate of sector's output, and rewrite in logarithm to form as log-liner equation (6):

$$\ln \frac{\Delta Y}{Y_t} = \alpha \ln \frac{\Delta K}{K_t} + (1 - \alpha) \ln \frac{\Delta L}{L_t} + \ln \frac{\Delta A}{A_t} \quad (6)$$

Thus, looking in equation (6), the first part  $\alpha(\Delta K/K)$  representing the contribution of capital in sector's output growth, the second part,  $(1 - \alpha) (\Delta L/L)$  representing the contribution of labor to sector's output growth, and  $(\Delta A/A)$  as third part that giving the contribution of TFP in sector's output growth.

#### 4. Growth accounting results of economic sector approach in UAE.

Table 1 describes the calculation for each economic sector (primary, manufacture, and service) as classified in long time-series from 1990-2015 and in group of periods of time from 1990-2000, 2000-2010, and 2010-2015. In the period of 1990-2015 service sector with 8.37% shows a higher growth in GDP's output compared to the primary and the manufacture sectors, where this rate was 6.7% and 6.88% respectively. From the period of 1990-2000 the average growth rate was higher in the primary sector (14.82%) compared by the manufacture and the service sectors with 6.0% and 5.89% respectively. Furthermore, the manufacture sector had a

higher growth of about 12.75% than the service sector with 10.49%, specifically from 2000-2010. However, between 2010-2015 the service sector gained a growth of about 7.99% followed by the manufacture sector with a growth of 4.01% fm. Thus, it be concluded that the development of average annual growth rate was generated mainly by the primary sector in 1990-2000, then by the manufacture sector in 2000-2010, and finally by the service sector in the period of 2010-2015. In general, service sector was followed by the manufacture sector, which they were more grown from 1990-2015.

**Table 1.** Growth Accounting calculation for Economic sectors from (1990-2015).

	Average Annual Growth Rates				Share of Growth Due to:		
	Y	K	L	A	K	L	A
<b>Primary</b>							
1990-2015	6.70%	1.59%	4.71%	0.40%	24%	70%	6%
1990-2000	14.82%	5.33%	6.75%	2.73%	36%	46%	18%
2000-2010	1.98%	-1.84%	4.15%	-0.34%	-93%	210%	-17%
2010-2015	1.44%	0.62%	1.09%	-0.27%	43%	75%	-19%
<b>Manufacture</b>							
1990-2015	6.88%	3.08%	5.93%	-2.13%	45%	86%	-31%
1990-2000	6.00%	1.82%	6.02%	-1.83%	30%	100%	-31%
2000-2010	12.75%	5.05%	7.61%	0.09%	40%	60%	1%
2010-2015	4.01%	1.31%	1.09%	1.61%	33%	27%	40%
<b>Service</b>							
1990-2015	8.37%	4.13%	5.21%	-0.97%	49%	62%	-12%
1990-2000	5.89%	3.97%	4.93%	-3.01%	67%	84%	-51%
2000-2010	10.49%	4.73%	6.98%	-1.22%	45%	66%	-12%
2010-2015	7.99%	1.69%	1.09%	5.22%	21%	14%	65%

Source: the calculation done by the researcher based on data from FCSA.

In term of capital accumulation (Table 1), the service sector with 4.13%, was higher in annual average growth from 1990-2015 followed by the manufacture sector with 3.08%. On the other side, for the period from 1990 to 2000 it was higher in the primary sector (5.33%). Furthermore, the manufacture sector with 5.05% was higher as well was in the same period.. The average annual growth rate for labor was between 1.09% and 7.61, namely higher compared to the capital accumulation. Thus, the growth in the manufacture sector was the highest with almost 6% compared to 5.21% and 4.71 in the service and manufacture sectors respectively. The technology factor was mostly given negative figure between 2010-2015 unlike the service sector with a growth of 5.22%. In close, the annual average growth in labor was the highest in all sectors at different group of periods. In addition, the TFP grew in the service sector between 2010-2015.

According to Table 1 the contribution to output growth share was driven by labor in all sectors and periods of time. From 1990-2015, the share of growth due to labor was 70%, 86%, and 62% as compared to the share of growth due to capital in same period with 24%, 45%, and 49%, for the primary, the manufacture, and the service sectors, respectively. Also, the share of growth due to capital declined between 2010-2015 in the service sector and manufacture sector, unlike the situation in primary sector, where it increased. TFP had negative figures, unlike in the primary sector from 1990-2015. In addition, the share of growth of TFP between 2010-2015 deserved positive value in the manufacture and service sector. The share of growth due to TFP was higher compared to capital and labor with 65% and 40% in the service and the manufacture sectors, respectively in the period of 2010-2015.

In conclusion, the path of development of the three sectors started with the primary sector from the period 1990-2000, then the manufacturing sector between 2000-2010, and lastly the service sector in the period 2010-2015. In general, the service sector contributed more to the growth followed by the manufacturing sector between 1990-2015. The contribution of labor was significantly to the output growth in all sectors due to the increase of the number of labor and not to the improvement in TFP. In addition, the share of capital accumulation to the growth deserved higher growth in the manufacturing and the service sectors owing to the huge investments taken place.

## 5. Discussion

The study provided a better understanding of the stages of growth in the economic sectors of the UAE. The results reached the stage of determining the actual moving of the UAE economy from agriculture to other sectors such as the services and the industry. It can be stated that the shift happened in the UAE economy has been observed from the beginning of year 2000 with the service and manufacturing were contributed more to UAE's GDP. On the other side, it can be concluded that the impact of growth in output was due mostly to increase in the number of workers.

## 6. In conclusion

The growth accounting approach was used to examine the division of UAE's economy through three sectors according to the classification of the UN. The calculated results contribute to the understanding of the stage of development of UAE's economy, and which sector was rolling at specific period of time. Therefore, results can be put in two perspectives as below:

Annual average growth rate:

- From 1990-2015, the output of the service sector was deserved the highest annual average growth rate about 8.37%, which followed by the manufacturing sector about 6.88%.
- From 1990-2015, the annual average growth rate for the labor inputs was dominated at all three sectors of the economy, where it was 4.71%, 5.95%, and 5.21% in the primary sector, the manufacturing sector, and the inspection and repair sector, respectively.
- From 1990-2015, the annual average growth rate for the capital accumulation deserved higher growth in the service sector and the manufacturing sector, where were 4.13% and 3.08%, respectively.
- From 1990-2015, the annual growth rate for TFP was negative in the service and the manufacturing sectors, unlike the primary sector.

- From 1990-2000, output of the primary sector deserved higher annual average growth rate about 14.82%.
- From 2000-2010, the output of the manufacturing sector deserved higher annual average growth rate about 10.49%
- From 2010-2015, the output of the service sector recorded the higher annual growth rate where it was 7.99%.
- From 2010-2015, the annual growth rate for TFP was positive in the manufacturing and the service sectors where they were 1.61% and 5.22%, respectively.

Contribution share of growth due to production factors:

- From 1990-2015, the share of growth due to the labor was deserving significant impact of the growth of each sector, where was 70%, 86%, and 62% in the primary, the manufacturing, and the service sectors, respectively.
- From 1990-2015, the share of growth due to the capital were 24%, 45%, and 49%, for the primary, the manufacture, and the service sectors, respectively.
- From 1990-2015, the share of growth due to TFP was positive only in the primary sector about 6%, where it was negative in the manufacturing and the service sectors which were -31% and -12%, respectively.

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## DIPLOMACY. A BRIEF ANALYSIS OF THE TYPES OF DIPLOMACY

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**Abstract:** *This paper involves research and presentation of the types of diplomacy. Thus, starting from ad-hoc diplomacy, then classical diplomacy and then multilateral diplomacy, we identified the following types of diplomacy: cultural, parliamentary, economic, public, and military. The institution that first put the issue of peace and security at the international level was the League of Nations. Thus, for the first time in history, it was attempted to identify the means and ways to achieve peace, based on international law. The multidisciplinary of diplomacy can be seen by defining it as: the ability to manage relations between states, science or art. As a science, diplomacy has as its object the analysis of the legal and political aspects between countries. Diplomacy is governed by legal norms through International Law, having well established the rules and principles on which it is based. With regard to cultural diplomacy<sup>3</sup>, the Ministry of Foreign Affairs acts through diplomatic missions, consular offices and Romanian cultural institutes of Romania abroad and is supported by the network of Romanian language, literature, culture and civilization lectures, which operate in foreign universities and the "Cursul de Language, culture and civilization of Romania "(LCCR). The Romanian Cultural Institutes are coordinated by the Romanian Cultural Institute (ICR) and operate under the administrative subordination of the MFA. They operate in Beijing, Berlin, Brussels, Budapest (with Szeged branch), Chisinau, Istanbul, Lisbon, London, Madrid, New York, Paris, Prague, Rome, Stockholm, Tel Aviv, Warsaw, Venice, Vienna<sup>4</sup>. Parliamentary delegations have the task of maintaining and developing links with parliaments in third countries, and at the same time promoting the values and principles of the European Union in these countries. All in all, through all types of diplomacy identified and not only, are pursued the fulfillment of generally valid objectives: facilitating the development of relations between states in different degrees of development; Settling disputes amiably; Developing partnerships in areas of interest: economic, cultural, defense, etc .; Promoting traditions; Legislative standardization.*

**Keywords:** *diplomacy; types of diplomacy; international law.*

**JEL Classification:** *F00; H00; K1; K2.*

### **Public Diplomacy or "Soft Power"**

Among the types of diplomacy identified, the first one will be public diplomacy. Public diplomacy<sup>5</sup> serves many purposes. It can be used to gain the support of people and institutions, to attract people to share freedoms and values, to convince others who we are, what we do and what we are pursuing, to educate and unite through the exchange of ideas, people, experiences and Trade, to demonstrate goodwill and the

<sup>3</sup> <https://www.mae.ro>, accessed on 01.04.2017

<sup>4</sup> Idem

<sup>5</sup> I. M. Anghel, G. Silași, A. D. Crăciunescu, *Diplomația Uniunii Europene (și regulile acesteia)*, Ed. Universul Juridic, 2015, p. 59

desire to achieve political arrangements; Public diplomacy helps state diplomacy, legitimizing it or influencing it at the public level.

### **Economic Diplomacy<sup>6</sup>**

According to the Ministry of Foreign Affairs, economic diplomacy is the foreign policy function that ensures the compliance of foreign policy approaches with the objectives of promoting the economic welfare of the citizens of a country. It aims to use foreign policy instruments to support the economic interests of Romanian entrepreneurs and the Romanian state.

Economic diplomacy provides an efficient framework of institutional cooperation in order to achieve concerted efforts to promote the economic objectives of Romania abroad and, respectively, to support the attraction of foreign investments in Romania.

The main tasks are:

- defense of Romanian economic interests abroad;
- supporting and promoting energy security objectives;
- cooperation with international economic organizations;
- inter-institutional cooperation on economic lines;
- Providing economic expertise within the Ministry of Foreign Affairs.

### **Cultural Diplomacy<sup>7</sup>**

Along with political and economic diplomacy, cultural diplomacy is the third pillar of diplomatic activity.

The main objectives of cultural diplomacy activities are:

- developing relations with other states, both bilaterally and multilaterally, through culture, education, science and technology, the media, youth and sport, and cultural tourism;
- promotion of Romanian cultural values;
- building and consolidating the image / reputation of Romania abroad.

In order to achieve these objectives, the MFA uses the following instruments specific to cultural diplomacy:

- Bilateral cooperation agreements and programs;
- Collaboration with the Romanian Cultural Institute, with the Romanian cultural institutes abroad and with the foreign cultural institutes / centers in Romania;
- Bilateral educational relations and studies in Romania;
- Multilateral and regional cultural cooperation;
- Agreements and intergovernmental programs in the fields of culture and education are the legal basis by which different projects and bilateral cultural and educational exchanges are carried out.

In accordance with Law 356/2003 on the establishment, organization and functioning of the Romanian Cultural Institute, republished in 2013, and Government Decision no.492 / 2004 on the establishment, organization and functioning of Romanian cultural institutes abroad with the subsequent modifications and completions, the Romanian cultural institutes Berlin, Brussels, Budapest (with Szeged branch), Chisinau, Istanbul, Lisbon, London, Madrid, New York, Paris, Prague, Stockholm,

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<sup>6</sup> <https://www.mae.ro>, accessed on 01.04.2017

<sup>7</sup> Idem



Tel Aviv, Warsaw, Vienna. From Rome and Venice are coordinated by the MFA, ICR and the Romanian Academy.

The lectures on Romanian language, culture and civilization represent the continuation of a true tradition of teaching Romanian language in foreign universities. The performance of these lectures by the Romanian Language Institute is the way in which the Romanian State promotes Romanian language, literature, culture and civilization in the academic environment outside the country, according to the linguistic policy specific to the European Union. Through Romanian diplomatic missions abroad to identify higher education institutions and maintain dialogue between them and the Institute of Romanian Language, there are currently 44 lecturers of Romanian at universities in Europe, North America, Asia South and East, Caucasus.

### **Parliamentary diplomacy**

Delegations represent a unique form of parliamentary diplomacy. The European Parliament has identified how to take part in election observation in third countries through the 40 existing delegations. Thus, they are an element of maximum interest. This interest is materialized by establishing relations with MPs from the partner states of the European Union, respectively in developing relations as a way of creating links and obtaining concrete information.

History and types<sup>8</sup>. Prior to the 1979 elections, the European Parliament's external relations were reported to the European Commission's agreements with third countries. The first interparliamentary delegation, independent of a specific agreement, was formed in 1972 for relations with the US. Since then, the number of delegations has steadily increased, directly proportional to the importance of the European Parliament in external relations.

At the beginning of the 2009-2014 term, the European Parliament had 40 interparliamentary delegations. These are two types:

- interparliamentary delegations whose mission is to maintain relations with the parliaments of countries outside the European Union that have not applied for membership;
- Joint Parliamentary Committees, which maintain contact with the parliaments of the candidate countries and with the countries that have signed Association Agreements with the EC (European Community).

Parliament also has five Parliamentary Assemblies bringing together the Members of the European Parliament and the African, Caribbean and Pacific MPs in the Mediterranean (EP Delegation to the Euro-Mediterranean Parliamentary Assembly), Latin America (Delegation to the Euro-Latin American Parliamentary Assembly), eastern EU neighboring countries and NATO countries.

### **The role of delegations**

The role of the delegations is highlighted by the following:

- Through them, a multitude of contacts are made available to MEPs;
- There is a communication platform with third countries;
- It is a safe and important way to find information;

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<sup>8</sup> <http://www.europarl.europa.eu/sides/getDoc.do?language=ro&type=IM-PRESS&reference=20090911STO60554>, accessed on 01.04.2017

- On the external side of European Union policy, he is in charge of tracking respect for human rights in partner countries;
- Delegations have the task of dealing with the enlargement of the European Union by supporting new countries to meet the requirements for the accession process.

The meeting of delegations takes place once a year, taking place at the European Parliament or in the partner state, alternately. There may be delegations that meet twice a year, and Parliament has the opportunity to organize ad hoc delegations.

#### Parliamentary Delegations

The values and principles of the European Union in third countries are promoted through parliamentary delegations that maintain and develop relations with parliaments in these countries.

At the parliamentary assemblies, the number of deputies in the delegation ranges from 12 to 70, with 41 delegations. Their work in the Conference of Delegation Chairs is supervised and coordinated by the Delegation Chairs.

#### Types of delegations<sup>9</sup>:

- Delegations to Joint Parliamentary Committees (CPMs) are responsible for relations with parliaments of EU candidate countries and parliaments of countries that have association agreements with the EU;
- delegations to the Parliamentary Cooperation Committees (CPCs) were set up in accordance with the cooperation agreements between the European Union and the third countries concerned;
- interparliamentary delegations are responsible for relations with the parliaments of countries outside the European Union that are neither candidate countries to the EU, nor have they signed partnership and cooperation agreements;
- delegations to the multilateral parliamentary assemblies (Euro-Mediterranean, EU-Latin America, ACP-EU and Euronest) confer a parliamentary dimension on regional partnerships.

#### Military Diplomacy or Defense Diplomacy<sup>10</sup>

International military co-operation often has its roots in historical ties, but there is usually the basic motivation of national interest. The international links in the field of military intelligence, backed by defense diplomacy, are ultimately a set of professional negotiations, value and the opportunity for information exchange depending on the level of confidence and development of bilateral relations between states, as well as the power Military intelligence services.

The general framework in which defense diplomacy is conducted as a distinct field of military intelligence activity never exceeds that in which the external relations of a state are taking place, being an integral part of foreign policy and a tool of preserving national interests.

<sup>9</sup> <http://www.europarl.europa.eu/parliament/public/>, accessed on 01.04.2017

<sup>10</sup> [http://www.mapn.ro/publicatii/2014/infosfera/infosfera\\_4\\_2014.pdf](http://www.mapn.ro/publicatii/2014/infosfera/infosfera_4_2014.pdf), p.21, accessed on 01.04.2017

## Conclusions

Diplomacy, through its various types, is an important tool to ensure the continuity of relations developed between states or to resolve the differences that have arisen during the development of these relations.

Each country maintains relationships developed with other states through ministries, organizations, and institutes with a focus on this issue.

In the last period, terrorism in all its forms has seen a visible development. Almost all states of the world have taken steps to stop these terrorist activities by various means and means: relational, military, respectively diplomatic. Thus, the importance of diplomacy is emphasized once again, its necessity being obvious.

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## GUIDELINES ON THE VOCATIONAL TRAINING OF ADULTS IN THE EU

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**Abstract:** *From the theoretical aspects related to the vocational training of adults presented in the introductory part through the analysis of the specialty literature, the paper aims to answer two questions: How is vocational training activity regulated in the European Union documents? What is the current situation at EU level of adult participation in education and training? The answer to the first question contains aspects related to the way in which the vocational training activity is regulated under the Treaty on the Functioning of the EU, aspects regarding vocational training in the Europe 2020 Strategy as well as the analysis of some key actions brought forward by the "Agenda for new skills and jobs" initiative. To answer the second question, we have analysed the situation of adult participation in various forms of education and training at EU level in the light of the results of the Adult Education Survey (AES), which is part of EU statistics on lifelong learning. Thus, analyzing existing data, there are considerable differences in the level and trend of participation between Member States. The adult participation rate in the AES 2011 survey varies between 8% (Romania) and 71.8% (Sweden). These data are very little different from those of the AES 2007 survey in which Romania recorded 7.4% and Sweden 73.4%. The overall picture shows a high rate of participation in the Nordic countries and some Western European countries (Denmark, Germany, France, Luxembourg, the Netherlands, Austria, Finland, Sweden and Norway) but also in some eastern and southeast countries Europe (Estonia, Cyprus, Hungary, Portugal and Slovakia). For seven countries (Denmark, Germany, Estonia, Spain, Austria, Poland, Portugal) there is an increase of over 10% in the participation rate as a result of comparing AES 2007 and AES 2011 data. The largest increase is recorded in Portugal, where the obligation for employers to provide vocational training for their own employees was introduced in internal regulations and implemented. Unfortunately, Romania is ranked last, both according to AES-2007 and the AES-2011 results.*

**Keywords:** *vocational training of adults; European Union; Treaty on the Functioning of the EU; Europe 2020 Strategy.*

**JEL Classification:** *J23; J24.*

### Introduction

The importance of professional qualification in the production process was emphasized a long time ago. In the 18<sup>th</sup> century, Adam Smith in his book "An inquiry into the Nature and Causes of the Wealth of Nations" shows that improving workers' knowledge is a factor of economic progress, the idea being taken over by other economists as well. They regarded training as an investment, which led to the rise of the theories on human capital. In this respect, we must recall that Gary Becker was the first to use economic calculation in the formation and acquisition of knowledge by individuals. (Nica, 2011)

Continuing training gains in Europe an important role in the post-war reconstruction efforts, making it a "means of alleviating qualified workforce shortages and driving to economic growth". After 1971, training becomes compulsory in France for most enterprises and for this reason the training plan has long been seen as an obligation. It should be noted, however, that a growing number of enterprises took advantage of the benefits of enacting such plan, and at present "the training plan proves to be a real managerial tool to be used in the service of enterprises" (Diop, 2012:41)

Human resources training and development is a leading human resource management function and focuses on the joint efforts to improve employee skills and the performance of the organization (Stanciu et al., 2003).

There is a difference between training and professional development. Thus, vocational training is a training process in which participants acquire the theoretical and practical knowledge necessary in their professional activity, and development is a more complex learning process in the long run, with the goal of preparing employees to meet both current job requirements and future demands. (Mathis and Jackson, 1994)

Pfeffer (2010) considers training an essential component of the high performance work system as these systems are based on "practical knowledge and the initiative of valuable employees to identify and solve problems, to initiate changes of the working methods and to take responsibility for quality. " (Pfeffer, 2010:101)

Wayne et al (2002) identifies five stages of the training and professional development process: establishing training and professional development needs, formulating clear and concise objectives, choosing training and professional development methods, implementing these programs and, finally, evaluating the process of training and professional development using criteria such as: participants' opinions, the scope of training, behavioural change and the achievement of the objectives of the programs.

As to the need for training and professional development, their analysis involves information coming from three levels: the organizational level that includes data about the organization as a whole, the job level that requires information on activities, tasks and responsibilities and the individual level that includes employee data such as training programs attended, evaluation results, etc. (Ghergut, 2003)

The diversity of training and professional development needs determines the existence of a large number of methods, of which we mention (Armstrong, 2010, Lefter, Deaconu and Manolescu, 2012, Păuș, 2006): case study, role play, brainstorming, lectures, demonstration, "I know/ I want to know/ I've learned" method, gallery tour, cluster method, debates, simulation, e-learning.

Starting from the theoretical considerations presented above, the present paper aims to answer two questions: How is vocational training activity regulated in European Union documents? What is the current situation at EU level of adult participation in education and training?

### **1. Professional training in the European Union's documents and from the perspective of its institutions**

The global economic crisis has brought to the attention of the EU and the Member States institutions a number of structural problems and shortcomings. These include: increased unemployment rate, an increasing aging of European population, lack of training/ skills and, last but not least, skills shortages found especially among young people.

An informative document, prepared in November 2014 under the European Commission (European Commission 2014: 4), shows that the youth unemployment rate at EU level is over 20% and in some states, over 50%. The same document states that *about 20% of young Europeans do not reach the minimum level of basic reading, math and science skills. Of which, six million leave the education and training system after they have completed the gymnasium cycle at most.* Unfortunately, the consequences are quite serious; for example, the same study highlights the fact that only one adult out of two is working if he or she is unqualified or poorly qualified and the chances of recruiting qualified workers are much higher. The organization of the education and training system is the area of competence reserved to the Member States of the European Union. In this respect, Articles 165 and 166 of the Treaty on the Functioning of the European Union (TFEU), the Consolidated Version (2012), highlights that the European Union respects the diversity of national regulations and priorities and is not entitled to harmonize Member States' legislation in these areas.

EU's contribution to qualitative development of the educational field is achieved by encouraging, supporting and complementing the cooperation actions between Member States, by fully respecting the Member States' responsibility in this field.

Europe 2020 was launched in 2010, which is the European Union's strategy for a 10-year period where European decision-makers have tried to formulate solutions to support Member States especially during the economic crisis, but the overall aim of the strategy is to eliminate the discontinuities of the current development model and to create conditions for a *smart, sustainable and inclusive economic growth*.

The strategy has 5 essential objectives, each of which is linked to at least one specific initiative:

**Table 1:** Europe 2020's objectives and its indicators

<b>Europe 2020 strategy objectives</b>	<b>Indicators related to Europe 2020 strategy</b>
1. Employment	An employment rate of 75% among the population aged between 20 and 64;
2. Research and development	The allocation of 3% of EU GDP for research and development;
3. Climate change and sustainable use of energy	3.1. A 20% reduction of greenhouse gas emissions (or even 30% under favourable conditions) compared to 1990 levels; 3.2. Increasing the share of renewable energy sources by up to 20%; 3.3. 20% increase in energy efficiency;
4. Education	4.1. Less than 10% reduction in the early school leaving rate; 4.2. Increased to over 40% of the share of higher education graduates among the population aged 30-34 years
5. Fight against poverty and social exclusion	5.1. Reduction by at least 20 million in the number of people suffering or in risk of suffering from poverty and social exclusion

Source: [http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/targets/index\\_ro.htm](http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/targets/index_ro.htm)

The above-mentioned objectives define the European Union's position projected for 2020 in terms of major parameters. These are to be achieved through joint actions, both at European and national level, without undergoing a burden-sharing in this respect. In order for each Member State to be able to track down the evolution of indicators in major areas, Europe 2020 objectives are translated into national objectives.

In October 2015, the European Commission decided to rationalize the European Semester, among other things, by placing a much greater emphasis on social and employment performance.

*Employment*, one of the five headline targets of Europe 2020 strategy, is supported by three major initiatives: "Youth on the Move", "An Agenda for New Skills and Jobs", "The European Platform against Poverty and Social Exclusion".

"The Agenda for New Skills and Jobs" includes a series of measures aimed at achieving relevant objectives, as follows:

- to support reforms aimed at improving flexibility and security in the labour market ("*flexicurity*");
- encourage citizens to gain skills so that they are more competitive on the labour market;
- improve the quality of work places and conditions.

In 2010, the European Commission made public the Communication entitled "An Agenda for New Skills and Jobs: a European Contribution to Full Employment" (2010). The substantial increase of employment (especially among young people, women and older workers) can be achieved, according to the Commission, through focused actions divided into four key priorities:

- better functioning of labour markets;
- a more competent workforce,
- better quality of jobs and working conditions,
- stronger policies to promote creation of jobs and labour demand.

This initiative - "An Agenda for New Skills and Jobs" - through the 13 key actions proposed and accompanying and the preparatory measures, is the possible contribution of the EU to the concerted effort of the Member States to reach Europe 2020 target - *75% employment by 2020*.

Of the 13 key actions of the "Agenda ...", the third is about lifelong learning and it is formulated as follows: "The key importance of the accumulation of skills and qualifications throughout active life requires comprehensive strategies for lifelong learning and, in particular, a new approach to adult education based on common principles, such as shared responsibility and partnership, effective funding mechanisms, flexible pathways and quality initial education and specific continuing training. Based on the progress made in the Copenhagen process, the Commission will present in 2011 a Communication on the implementation of lifelong learning and skills development strategies; a European policy manual setting out a framework for the implementation of lifelong learning and a renewed action plan for adult learning" (European Commission 2014: 9).

The ability of the workforce to adapt to technological change through new ways of organizing work is a real challenge, especially given the persistence of skills and competency mismatch in the labour market. We are witnessing a circle of influence: accelerating growth is achieved by increasing productivity and employment, influenced by fundamental factors such as investment in training and education

systems, anticipation of training needs and skills needs. To improve the level of education, the EU is concerned about *reducing school drop-out to no more than 10%* and increasing the percentage of tertiary education graduates.

Reorienting people to high added value sectors and expanding the occupational field can be achieved by improving access to lifelong learning. The transition between learning and employment can also be facilitated by modularising learning programs. These learning paths should also validate non-formal and informal learning, and should focus on learning outcomes linking learning to vocational guidance systems. In order to employ various vulnerable social groups (low-skilled, unemployed, disabled, people with mental disorders, minority groups), public employment services should step up information and guidance services as well as offer vocational training programs tailored to the needs of these groups.

Vulnerable people are those people who "for reasons such as age, gender, physical or mental health, or who, due to economic, social, ethnic and/ or cultural circumstances, find it difficult to fully exercise their rights as they are provided by law (Ippolito and Sánchez 2015: 3).

The European Commission stresses the need to target other categories of the population for the recovery/ improvement of human resources, among which: older employees who are more vulnerable in case of restructuring; people who resume work at a workplace after a period in which they have been caring for family members dependent on their family (minors, people in temporary work incapacity, sick, etc.). Lifelong learning can be enhanced by involving stakeholders (employers, training providers, public services) and social dialogue. At regional and local level partnerships between employers, vocational training providers and public employment services can be concluded with the following objectives: dissemination of information on the importance and benefits of vocational training; facilitating access for people, especially those belonging to vulnerable groups, to vocational training programs; identifying training needs in accordance with labour market requirements.

The involvement of employed persons in lifelong learning and the growing public and private investments in professional formation could be made by applying *efficient stimuli* (such as tax exemption systems, educational vouchers for specific groups and so on) through cost sharing measures.

*Improving the process of reconciling labour market needs with the training process is another key action* of the above mentioned Agenda. Since 2008, the Commission and the Council have drawn attention to the fact that anticipating and meeting labor market skills requirements are a top priority for the EU.

One of the effects of the economic crisis has been to accelerate the pace of economic restructuring, which has increased the proportion of the unemployed from the affected sectors. The generated social problem was that the redundant workforce could not be absorbed by the expanding sectors precisely because of the low level of competence or the low capacity of the actors involved in training to ensure retraining at the required pace. In the long run, the importance of skills is even more visible. For example, the EU-wide forecast is set as follows: by 2020, it is expected that the number of jobs occupied by highly qualified persons will increase by 16 million, and the number of jobs for the lower-skilled is expected to increase by about 12 million. Moreover, attending the education system is directly linked to the adaptability of the individual to the requirements of the labor market; the probability



of involvement in any form of continuing vocational training or retraining is seven times higher for those who have attended the education system.

In recent years, technological development for the use of renewable energies (hybrid cars production, green energy production) is linked to the need for ecological skills (the EU aims to have 3 million green workers by 2020) has emphasized the deficit of qualified personnel in these areas. The ICT sector also faces the need for specialized workforce, with the deficit of professionals in this field estimated at 700000 jobs in 2015. The health sector will have a deficit of 2 million jobs (including healthcare auxiliaries) by 2020, which represents 15% of the EU-projected needs.

Providing skills that prove useful - leading to a reduction of unemployment and an increase in the number of specialists - cannot be achieved without a careful analysis of the labor market requirements as to the need for skills. Moreover, the forward-looking instruments for the labor market implemented at Member State, regional, by sector and EU level need to be constantly improved.

The Commission underlines that education and training systems at the level of each Member State must ensure the appropriate range of skills, in particular, key competences (computer skills, foreign language communication, media education, etc.) but also the development of the necessary skills, especially for young graduates, for a rapid transition between school and employment.

In order to maximize the potential of the employees, the Commission considers that there must be an *effective and efficient cooperation between employers, the main actors in the field of education and training and institutions offering career counseling*. In this equation, employment services play an essential role, as a *junction point* between the three major areas, as they provide more services such as: competence assessment, occupational profiles, counseling on training and provision of training, professional orientation, work mediation between employers and potential employees.

Given that one of the underlying principles of the European Union is the free movement of persons and workforce, the Commission considers that interregional and transnational mobility across the EU is influenced by many factors such as: recognition of the experience of mobility; the difficulty of finding a job for a partner; language, etc. Lately, efforts have been made to modify legislation and administrative procedures so that labor mobility can be improved.

Exploiting the potential of migration is another topic on the Commission's agenda because it is desirable to attain a full employment of this workforce by removing obstacles such as discrimination or non-recognition of skills and qualifications.

## **2. The status of adult participation in various forms of education and training at EU level**

Cedefop is a decentralized agency of the European Union, founded in 1975 by a decision of the Council of the European Union, that supports and develops European policies in the field of vocational training and contributes to their implementation. The Agency works closely with the European Commission, Member State governments, trade union and employers' representatives, researchers and practitioners in the field of vocational training, providing them with up-to-date information on the development of the field and creating the necessary framework for debating issues and policies about, or closely related to professional training at European level.

Education and training are key tools in skills training and, as I mentioned before, are one of the main elements of Europe 2020 strategy. "Job-related adult learning and

continuing vocational training in Europe: a statistical picture" is the title of a research conducted under the aegis of Cedefop and published in November 2015. This document provides stakeholders with a statistical picture on vocational training and adult education in the EU Member States and Norway. The document attaches particular importance to the training programs undertaken by employees according to job requirements and employer-sponsored training programs for their own employees; the differences between the countries are also analysed based on their time evolution study. It also analyses the types, forms, purpose and support provided by employers to adult education, as well as the obstacles and barriers faced by both employees and employers.

The report was conducted after selecting, presentation and analysis of comparable data from Adult Education Surveys (AES) conducted in 2007 (AES-2007) and 2011 (AES-2011) and Vocational Training Surveys (Continuing Vocational Training Survey (CVT) conducted in 2005 (CVTS3: 2005) and in 2010 (CVTS4: 2010). These are important sources of statistical data at EU level that complete and help to understand and explain the indicator on adult participation in education and lifelong learning.

Chapter 3 of the study provides a detailed analysis based on the statistical data provided by the relevant opinion polls in the field of adult education and training. The benchmarking is based on the labor force survey, which is an important source for monitoring, both by the EU and by the Member States, of the population's involvement in continuing learning.

Within the framework of the Lisbon Strategy, the so-called *Life Long Learning Structural Indicator* has been defined as the benchmark for monitoring progress on European lifelong learning policy. This indicator is defined as the segment of the population aged between 25 and 65 who participated in various formal or non-formal types of adult education and/ or training in the last four months prior to the survey. The Lisbon Strategy has set a 12.5% target for the lifelong learning structural indicator. In 2010, the average European level of the indicator did not reach this target and even less was the percentage obtained by each Member State; a plausible explanation could be the economic crisis that was felt globally.

The 2020 Education and Training Strategy has set a 15% target for participation rate in lifelong learning, and statistical data for 2011 and 2012 suggests stagnation. (Cedefop, 2015: 51)

The Adult Education Survey (AES) and CVT (Continuing Vocational Education Survey) have been implemented to get a much more detailed picture of lifelong learning; among the dimensions included in these surveys and the information obtained are the following:

- A wider selection of learning activities such as on-the-job training;
- A detailed assessment of the reasons/ objectives of participation in training, in particular, identifying training activities closely related to the workplace;
- Observing companies as key actors and guarantors of the lifelong learning process;
- Information on funding sources, based on which the percentage and role of training funded by employers could be identified and the extent to which each Member State co-finances training activities;
- Estimating the time used by survey participants for learning activities, thus allowing the analysis of the intensity of participation to training programs during time and the comparative analysis at Member State level;

The Adult Education Survey (AES) is part of EU statistics on lifelong learning. Persons surveyed are interviewed about their involvement in various forms of education and training (formal, non-formal and informal). The target group is composed of people aged 25-64.

The survey is organized every five years and the results are published on the Eurostat website.

So far, two surveys have been conducted in 2007 and 2011, the next being planned for 2016.

Analyzing existing data, there are considerable differences in the level and trend of participation between Member States. (Cedefop, 2015: 53).

The adult participation rate in the AES 2011 survey varies between 8% (Romania) and 71.8% (Sweden). These data are very little different from those of the AES 2007 survey in which Romania recorded 7.4% and Sweden 73.4%.

The overall picture shows a high rate of participation in the Nordic countries and some Western European countries (Denmark, Germany, France, Luxembourg, the Netherlands, Austria, Finland, Sweden and Norway) but also in some eastern and southeast countries Europe (Estonia, Cyprus, Hungary, Portugal and Slovakia). For seven countries (Denmark, Germany, Estonia, Spain, Austria, Poland, Portugal) there is an increase of over 10% in the participation rate as a result of comparing AES 2007 and AES 2011 data. The largest increase is recorded in Portugal, where the *obligation for employers to provide vocational training for their own employees* was introduced in internal regulations and implemented.

Unfortunately, Romania is ranked last, both according to AES-2007 and the AES-2011 results.

If we compare the data obtained from the workforce survey and the Adult Education and Training Surveys (AES), we can conclude that the presented trends are in contradiction (AES results show a slight increase, whereas the results of the workforce survey shows a decrease in participation in lifelong learning over the period 2007-2011). The main reasons could be that the duration of the reference period, which is 4 weeks for the Work Force Survey and 12 months for the AES; covering the area of lifelong learning, in particular including (in the case of AES) or non-including (in case of EU-wide work force survey) on-the-job training.

### **Conclusions:**

Although at EU level the organization of the adult vocational training system is the field of competence reserved to the Member States, the Union supports and complements the actions of the Member States, especially by adopting legal provisions (the Treaty establishing the European Union), implementing policies and strategies in the field (Europe 2020 Strategy) and through key actions (An Agenda for New Skills and Jobs).

The European Center for the Development of Vocational Training (Cedefop), the EU's decentralized agency, was set up in 1975 to make the European Union more effective and to develop European training policies. Through Cedefop, a series of studies and analyzes aimed primarily at detecting the weaknesses of the vocational training system, proposing measures to improve the way it was carried out.

2020 Strategy for education and training has set a 15% targeted participation rate in lifelong learning, but analyzing the adult participation rate (age 25-64) in various forms of education and training, calculated as EU-average over the period 2007-2012, a stagnation process is observed in 2011 and 2012.

Starting from the results of adult education surveys conducted in 2007 and 2011, we can formulate the following conclusions:

- There are considerable differences between Member States in the level and trend of participation.
- The adult participation rate in the AES 2011 survey varies between 8% (the case of Romania) and 71.8% (Sweden), and in the AES 2007 survey, Romania recorded 7.4% and Sweden 73.4%.
- Romania is ranked last, both for AES-2007 and AES-2011 results.

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## INTERNATIONAL LEGAL REGULATION ON FOREIGN DIRECT INVESTMENTS

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**Abstract:** Analysing the factors that have impact in attracting foreign investors to an economy, we realized that the protection of investments plays a very important role. This protection has many practical forms, but one that appeared to gain the investors' trust was the clause from the Bilateral Investment Treaties regarding the international arbitration at ICSID. In last years the number of cases judged at ICSID had an exponential increase, and the damages that were awarded overpassed the amount of billions of dollars. This numbers had drawn our attention so that we considered that this subject needs further attention. For a better understanding of this field, a short presentation of the international regulation of foreign direct investments is presented in this research paper. The source of the international law is also an interesting aspect, because there is no international Parliament or Government or any other international law issuing institute. So, the legal principles in international law are coming from different sources such as: international conventions, international custom, general law principles recognized by civilized countries, previous decisions awarded by international courts and studies and other work made by scholars. In time, this had an interesting evolution, starting from no regulation till today when there are specialized international courts that only deal with international investment disputes.

**Keywords:** *Foreign Direct Investment; legal regulation; international law*

**JEL classification:** *F510; F370; K220.*

### 1. Introduction

Since there is no world government, no congress or parliament to issue laws, as happens in a single country, we have some significant difficulties in determining exactly what international law is. There is no single source of international law, but it is based on certain principles extracted particularly from the treaties signed between states, which are considered statements of authority of international law. The Treaties are the strongest and most influential, as they are consensual agreements between the signatory countries. At the same time, as stated in the Statute of the International Court of Justice (ICJ), the rules of international law can be found in practice in several forms: in the ordinary state, in the form of general principles of common law of several countries, Internal judicial.

In order to adjudicate on an investment dispute brought before the arbitral tribunal, the members of the tribunal must apply:

- International conventions;
- International customs in the field;
- The general principles of laws recognized by civilized nations;

- Other judicial or arbitrary decisions previously issued;
- Research and publications of internationally recognized specialists.

Prior to the Second World War, the disputes between foreign investors and host countries had, in particular, international law in the field of investment, with no treaty on which to rely. Negotiation of Treaties emerged as a phenomenon of the late 20th and 21st centuries respectively.

## **2. International law sources**

The courts are currently examining international customs in resolving investment disputes, but are based on the articles of the treaties on which the dispute arose.

Treaties. The treaties are similar to inter-country agreements: states change promises that they write down and sign. States may debate the interpretation or implementation of a treaty, but its provisions must be in written form. Treaties can address any area, such as: trade relations - the North American Free Trade Agreement, or the control of nuclear weapons - the Nuclear Non-Proliferation Treaty. These may be either bilateral (between two countries) or multilateral (between several countries). They may have their own enforcement rules, such as arbitration, or refer to enforcement by another agency, such as the International Court of Justice. Rules on how to decide disputes over treaties are found in a treaty - the Vienna Convention on the Law of Treaties (United Nations, 1969).

Custom. International customary law (ICL) is more difficult to establish than the provisions of a written treaty. ICL (also called state practice) is created by the concrete actions of states when they consider that action in another sense would be illegal.

For example, for thousands of years, countries have given protection to ambassadors. Even from ancient Greece and Rome, ambassadors from another country were not hurt during their diplomatic missions, even though they represented a country at war with the country where the embassies were located. Throughout history, many countries have publicly stated that they feel that ambassadors should be given this protection. Therefore, today, if a country would injure an ambassador would violate customary international law.

Another source for international law was previously mentioned as the general principles of law in civilized nations. These refer to the principles recognized by the domestic laws of the states.

Also, another source can be considered as coming from the work and research of the specialists. International law on damages does not benefit from the existence of a body issuing laws, and thus the international courts have shown a creative role in determining the legal principal to be used on judging the disputes brought before them.

## **3. Necessary and Compulsory Components for Damage**

Damage is a compensation granted by the court or the arbitral tribunal in favour of the party that has been injured by violation of his rights. Thus, in order to be able to talk about the damages awarded in a case judged by ICSID, the following conditions must be met:

- There is a dispute in which compensatory damages were requested;
- There must be a foreign investment;
- A measure or set of government measures must have caused loss to the foreign investor;

- The damages are to be awarded by the arbitration court on the basis of international regulations.

### **3.1. International dispute**

Damages appear as compensation for the injured party by the party who has committed an illegal act. The guilty party appear to be liable to pay for the negative consequences that the victim has suffered as a result of committing that illegal act. In international law, the term of compensation has been used to describe the consequences of a legal act that the State is doing on the basis of its rights, for example compensation is represented by the payment made by the State to the former owner whom he has expropriated.

The International Law Commission, ILC, has defined the term compensation as a way to correct a wrongful act by states. Thus, the two terms, damages and compensation can be used in the same meaning, being considered substitutable.

As a result of the increasingly frequent international transactions, foreign direct investments have grown significantly both in number and in form.

Foreign direct investment can be represented by both transactions and assets.

As transactions, foreign investment is an expense to acquire properties or other assets in order to generate future profits.

Foreign investors may enter into an economy as a result of benefits, exemptions, facilities offered by the host state, in particular this is happening in developing countries. In these countries governments grant different facilities to foreign investors to attract them into the economy. In the developed countries, foreign investors are attracted to the social, political, economically stable climate, specific to these countries, and they do not need any additional benefits. The way of entry into the host economy influences quite a lot the course of the process and the possible damages that will be granted in the event of a case on investment causes between the foreign investor and the host country.

### **3.2 Foreign investment**

Most investment treaties define investments as an asset, or a set of assets controlled or owned by a foreign investor. The definition of assets is quite wide, including both property, equipment and other tangible assets, as well as copyrights, patents, licenses and other intangible intellectual property rights.

When dealing with damages in a trial at ICSID, this part of the identification plays a particularly important role because the damages claimed must be based on an investment appraisal report and the losses suffered as a result of an incorrect act being taken by the host state.

In any of these definitions, to be able to talk about an investment will be required the existence of an entity willing to use his resources (time, money, intelligence, or any other resource) in order to obtain future benefits. In other words, an entity that is ready to sacrifice the short time available resources, hoping for future higher benefits.

The difference between domestic and foreign investment is given by the different nationality of the investor and the host country in which the investment will be situated.



### **3.3 The governmental measure that creates damages**

In order to address possible damages by the ICSID court, a mandatory condition is to identify a measure or more governmental measures that have led to the loss of the foreign investor. These measures may affect the investor's ownership, contracts, management, may be administrative, fiscal, cancellation of rights originally granted, etc.

### **4. Brief history of international regulations**

In 1953, the International Law Commission initiated a process of codification of articles on the responsibility of states. This project was completed only in 2001. These articles set out the conditions under which a state can be held responsible for wrongful acts or omissions.

These articles were divided into 4 parts. The first two parts are relevant to the damages that the court may grant.

The first part defines the illegal acts of the states, while the second part deals with the legal consequences of the acts discussed in the first part and the way of repairing these consequences.

However, it should be emphasized that Article 33 of the second part mentions that these articles apply only to the responsibility of a State towards another State. However, in addition to Article 33, paragraph 2 was introduced, stating that this Article does not affect the rights of other persons injured by a State.

Article 36 sets out the duty of States to compensate injured parties for any financial damage that can be measured, including lost profits.

Article 38 governs the obligation to pay the calculated interest on the amounts to be paid as compensation.

Even though these articles are not binding on disputes between foreign investors and host states, they are a basis for identifying the responsibility of States and recognizing their obligation to pay for compensation for losses caused by their incorrect acts.

The World Bank issued in 1992 a non-binding guide to dealing with foreign direct investment.

Rule IV refers to compensation for expropriation and unilateral revocation of contracts. This compensation is recommended to be done "in an appropriate, effective and prompt manner" for the expropriated investments at the market value of the assets taken.

Between 1945 and 1975 there were lump-sum agreements. More than 150 such agreements were concluded during this period. These consist of the payment of amounts negotiated by the State which infringed the rights of investors, to the Complainant State and the Applicant State divided that amount among those affected.

Following the development of the Bilateral Investment Treaties and their conclusion in a growing number, various comments have emerged regarding the relationship between treaties and international investment protection habits. Some specialists considered that these treaties, being so similar and having common articles in over 2000 treaties, can change international customs. But they have been contradicted by other specialists, such as Sornarajah, that countries have failed to conclude a single multilateral treaty, so even if bilateral investment treaties are related, they still have different provisions.

## 5. Relevant international courts and tribunals

Over time, several wrongful acts have been committed by the states that have affected foreign investors: expropriations, breach of contracts, other violations of their rights, acts that have led to disputes. These disputes between host states and foreign investors had to be judged by various courts. Thus, under bilateral treaties - BIT, regional ones, ex NAFTA or multilateral agreements (energy treaty), damages have been awarded to injured parties. The first sentence in an investment treaty dispute was issued in 1990, and then the number increased exponentially.

In 1981, the Iran-US Tribunal was created because, since the February 1979 revolution in Iran, relations with the US have suffered greatly, and by 2007 this court had already ruled over 960 disputes.

The International Court of Justice issued 30 sentences between 1922 and 1940 without much impact on compensation.

Following the invasion of Iraq by Kuwait, the United Nations Compensation Commission was founded in 1991 to compensate those who suffered as a result of this illegal invasion.

The European Court of Human Rights has issued decisions to compensate individuals, in particular following expropriations.

In the past, international law only governed relations between states. When a foreign investor was affected by an inappropriate act of the host state, he had two options: either to seek justice on the basis of domestic laws in the host country or to ask his state to judge with the host state. Both options were time consuming and resource intensive consuming, so that the possibility of initiating an arbitration request by the affected foreign investor, against the host state, has developed over time.

The ICSID International Centre for Investigation Dispute Resolution was set up as the main body for managing and resolving these disputes between foreign investors and host countries. Most bilateral treaties have a clause stipulating that any disputes between investors and states will be settled through international arbitration.

## 6. In conclusion

The development of international arbitration is based on the development of economic relations between different states. Investors are attracted from some countries by various opportunities to invest their capital available in other states. To protect the investments of these foreign investors it was necessary to sign bilateral investment agreements. Most of these agreements provide for a clause to resolve any disputes that may arise between the foreign investor and the host state through international arbitration, in particular within the International Centre for the Settlement of Investment Disputes.

In time, the international law regulation had an interesting evolution, starting from no regulation till today when there are specialized international courts that only deal with international investment disputes.

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## THE ELECTRICITY MARKET OF HUNGARY AND ROMANIA IN THE PAST FIVE YEARS

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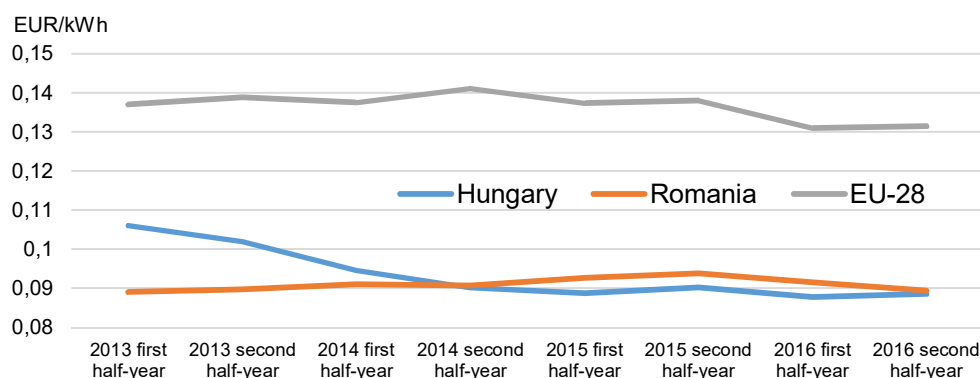
**Abstract:** *The European Parliament and 2009/28/EK Council Directive sets mandatory targets for energy from renewable energy sources for EU Member States. As much of the energy management of Hungary and Romania is currently based on fossil energy sources, so that CO<sub>2</sub> emissions are only slightly reduced compared to the previous period. In order to reduce the volume of greenhouse gases, both countries should increasingly involve renewable energy sources in their energy management. Renewable energy sources are durable energies that are constantly reproduced and therefore inexhaustible. Alternative energy sources include solar energy, wind energy, hydropower, geothermal energy and biomass in different forms. The importance of renewable energy sources is that their use is in line with the principles of sustainable development, as opposed to the use of non-renewable energy sources, does not cause cumulative adverse effects such as greenhouse effect, air pollution, water pollution. Not only because of the global warming crisis, but also because of the temporal overcrowding of global oil production, it is also necessary to separate from non-renewable resources.*

**Keywords:** *renewable energy, wind energy, biomass, solar energy, electricity, Hungary, Romania.*

**JEL Classification:** Q4.

### 1. The electricity market in Hungary and Romania

In this chapter, I present a comparison of the electricity market in Hungary and Romania, with particular reference to renewable energy sources. I have learned in the literature that the two countries have extremely different characteristics of renewable resources. In Romania, the high mountains and the sea mean great advantages; in the electrical energy sector, the water and the wind play a considerable part, while Hungary is better equipped in geothermal energy and as an agricultural country, in biomass. In Figure 1, unit prices of residential electricity can be seen in the two countries without taxes and fees.



**Figure 1.** Residential energy prices in Romania and Hungary  
Source: A personal edit based on EUROSTAT (2017a)

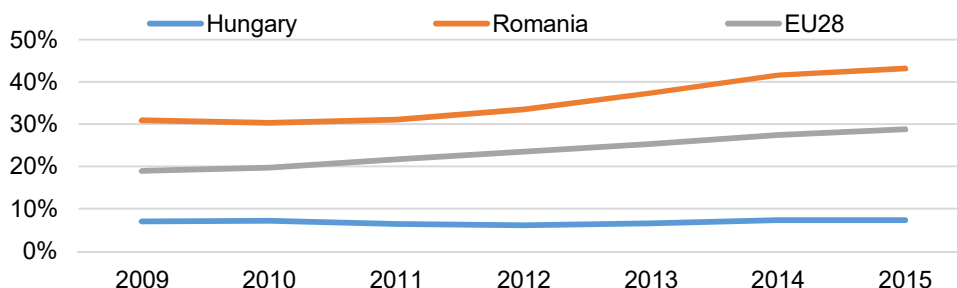
Figure 1 shows that the energy prices of both countries are below the EU average, Romanian prices have been stagnating in recent years, while Hungarian prices have decreased mainly due to government measures. In Hungary, average salaries in the private sector are €10,205, €6,746 in Romania, and € 34,210 in the European Union in 2014.

Energy dependence is an important problem to be solved in the world, because of which a country can be dependent on other countries, so it can be difficult to change political situations, and this may also be the case with their own power plants. This is measured by the share of the country's largest power plant. In Hungary, it is the Paks Nuclear Power Plant, which had a 53 per cent share of the country's energy output in 2015. The nuclear power plant started retail electricity production in 1982 and, as a result of the lifetime extension program, in 2012 and 2014, the first and second blocks received the twenty-year license. The expansion of the power station is on-going; in the framework of an inter-state agreement with Russia, by the end of the 2020's it will be extended by two blocks of 1200 MW output. This also means that Hungary will depend heavily on Russian import energy sources in the coming decades. In contrast, Romania's largest power plant, the Turceni Thermal Power Plant (Complexul Energetic Turceni) receives a mere 25 per cent share, so it will be less affected in case of a potential malfunction or definitive failure of the largest plant. When reviewing the literature, I learnt that Romania's energy sources are much more differentiated than those of Hungary, better exploiting the potentials of renewable energy sources than Hungary.

### **The role of renewable energies in the production of electricity in Hungary and Romania**

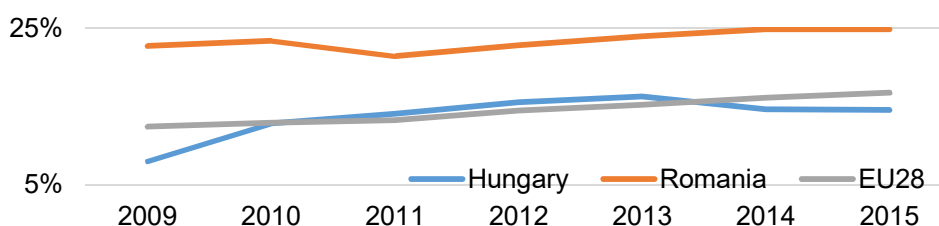
Romania and Hungary have very different potentials in terms of renewable energy sources as well. Hungary is a basin-like area, with large flat lands and without coastline, while Romania has great mountains, from where high gradient rivers start, and also a relatively long coastline. The comparison is justified, as the two countries pursued a similar energy policy during socialist times. However, after the change of regime, the situation changed because they were trying to rely more and more on

renewable energy sources. As EU member states, the countries aimed for less environmentally polluting solutions. The following diagrams summarise the place of renewable energy sources in the energy sector of the test countries (Figure 2 and Figure 3).



**Figure 2.** Share of renewable energies in electricity production between 2009 and 2015

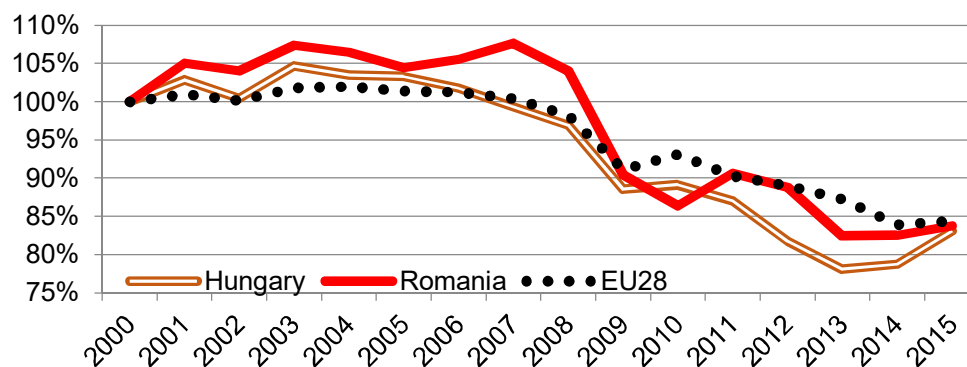
Source: A personal edit based on EUROSTAT (2017b)



**Figure 3.** Share of renewable energies in the production of energies altogether between 2009 and 2015

Source: A personal edit based on EUROSTAT (2017c)

Figure 2 clearly shows that Romania far exceeds the European Union's average, generating electricity from a clean energy source while in Hungary, because of the modest possibilities, renewable energy sources are only minimally involved in energy management compared to the average of the EU or Romania, although it can be seen in Figure 10 that the Hungarian renewables play the biggest role not in direct electricity production but in heating. If we look at all the energy production, Hungary will fulfil its 2020 undertaking; although current trends do not show that in the coming years progress will be made in renewable energy production due to the upcoming nuclear energy investment. By contrast, Romania will meet its undertakings for the 2020's in 2014 and will continue to pursue clean energy investments in the country. It is important to take into account that Romania started considerable renewable energy investments in 2009 and 2011, concerning specifically wind and photovoltaic power plants besides its already existing hydroelectric capacity.



**Figure 4.** Emission of greenhouse gases compared to the year 2000

Source: A personal edit based on EUROSTAT (2017f)

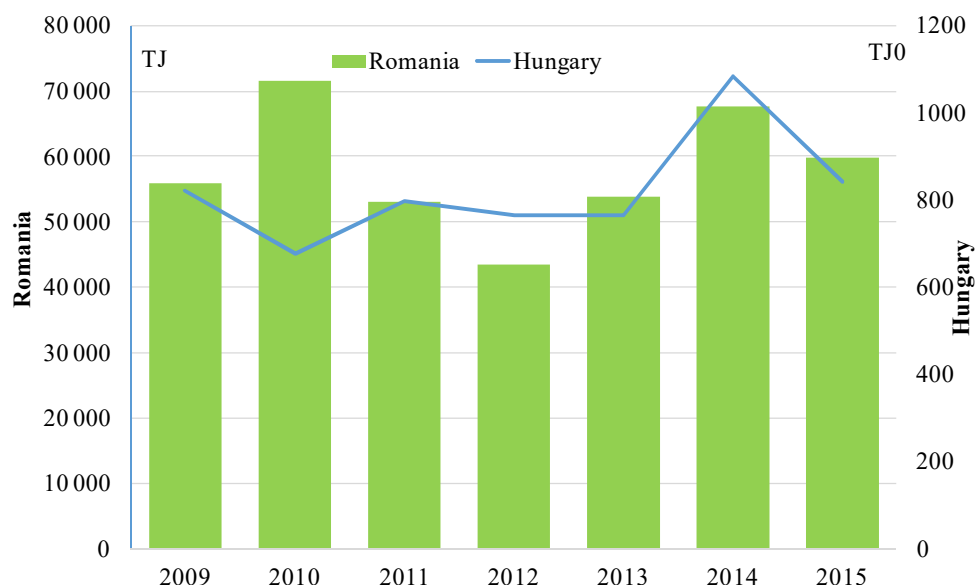
One of the crucial objectives of the European Union is to reduce greenhouse gas emission. In the literature, the data are generally compared with those of the 1990s but I have chosen the year 2000 as the base year to demonstrate the progress made in the new millennium over the past one and a half decades. The data were provided according to the equivalent of carbon dioxide in tones. It can be clearly seen in the figure that Hungary joined the EU 2004 and Romania in 2007. Both countries started their renewable energy projects in the middle of the 2000's but in the case of Hungary, it should also be taken into account that nuclear energy has also gained more popularity, which does not emit greenhouse gases. In the following parts, I examine what significance the different kinds of renewable energies have in the two countries.

#### **The role of hydropower in the electricity production of the two countries**

Hydropower in the electricity production is the most effective and most widely spread renewable energy (although its volume is wavering). The produced energy is influenced by the weather, since neither floods nor droughts do any good for the turbines. The amount of rainfall in spring and early summer is a key aspect throughout the whole year in the flow of rivers and the melting of the rivers in springtime. Romania and Hungary's largest stream is the Danube, which enters 8 more countries in the course of its 3000-km journey.

The Danube has the greatest theoretical hydropower potential. Romania utilizes this too as one of Europe's largest hydropower plants is located on the Danube, Iron Gate I. and II, which were built in the framework of the joint Romanian-Serbian project (Porțile de Fier, Ђердапска клисура). These power plants were built on the river where it leaves the Carpathian Basin. Apart from the Danube, probably Olt is the only other river that leaves the area. The significance of the Iron Gate in water management was already explored by Széchenyi István and 100 years later, the huge hydropower plant was built. Hungarians also planned a large Danube-project in the 70's. The Gabčíkovo–Nagymaros Dams dreamt of together with the Czechoslovaks would have had a much larger hydroelectric capacity than any other power plant but due to the social pressure of the regime change, the government abandoned the plan at the time. The government abolished the contract with Slovakia, who had built its own part. Emotions were stirred up and the case was taken to the International Court of Justice in Hague. Since then there has been no

discourse about the use of the shared section of the Danube. So the utilization of a considerable part of the river, providing nearly three quarters of water potential in Hungary is currently not talked about. Water power produced by the two countries is illustrated in Figure 5.



**Figure 5:** Energy produced from hydro power plants between 2009 and 2015 in Hungary and Romania

Source: EUROSTAT (2017d) on the basis of their own edit

The Figure 5 shows that there are remarkable differences between the possibilities in the two countries so they can only be represented by two separate minor axes, and this will be the case in other types of energies as well later on. This is the oldest type of renewable energy used in the two countries; in Hungary, the first plants were installed at the beginning of the 20th century, and in Romania, the first instalment took place in the 1960s in Moldavia on the river of Bistrița Aurie. Both countries reached their peak in the 1970s, when the largest hydropower plants in the countries were built (Iron Gate, Kisköre). Since then stagnation has been more of a characteristic. Romanians utilise their hydropower potential better, but Hungarians also have good management except for certain section of the Danube. Rivers in Hungary have a higher gradient (the Hernád and the Rába) but also less powerful power plants. These power plants are the oldest in Hungary. The Danube has one periodically operating hydro power plant (Kvassay Sluice) (Figure 6).

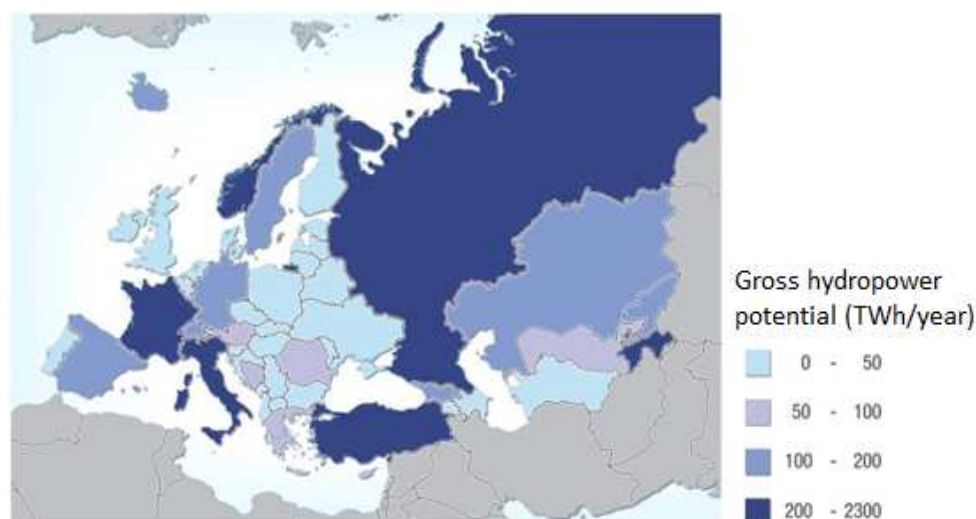
Romania has set up several power plants on its high water-potential rivers that were demonstrated in the literature. These rivers are the following: the Olt, the Lotru and the Szamos. Rivers coming from the Carpathians and the Transylvanian mountains are ideal for driving turbines. Figure 7 shows that both countries, compared to European conditions, have a modest water potential. But Romania is, without a doubt, a category higher in terms of water potential, but is still feeble among countries with great potential. Rivers of Western Europe, where rainfall is higher, and



the runoff of the water is also higher and more balanced as opposed to Eastern European ones.



**Figure 6.** Location of hydroelectric power plants in Hungary  
Source: I8 on the basis of their own edit

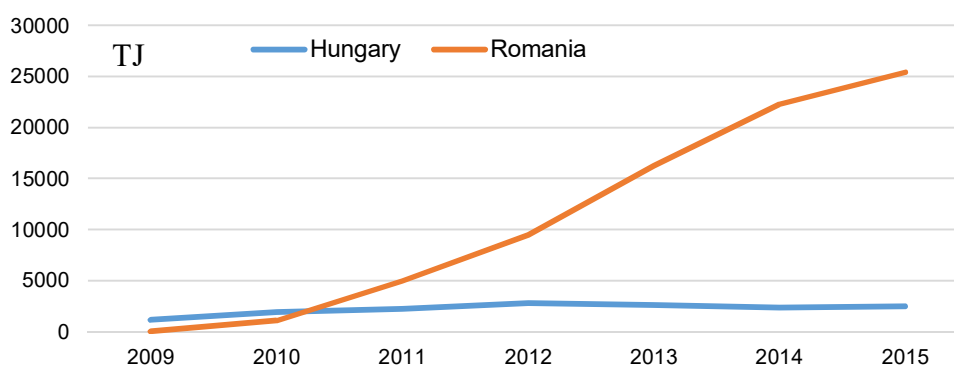


**Figure 7.** Europe and the States of the Independent States  
Source: Năstase et al., 2017

### The role of wind power in the electricity production of the two countries

It is difficult to compare the two countries when it comes to wind power, too, since the properties of the two countries are rather different from one another. In Hungary,

due to it being a basin-like area, winds blowing from the seas are slowed down by the terrain. The same is true of the Carpathian parts of Romania, in Transylvania and the Partium. In these areas only the western slopes of the Bányat Mountains are suitable for utilising wind power economically. Both of countries started utilising wind power relatively late – Hungary in 2001 and Romania in 2009. Ever since then, Romania is the one that has undergone spectacular development. Most of the Hungarian wind power plants are located in the western part of the Transdanubia and very logically so as that part of the country is the windiest. There still are some exceptions such as Kulcs (central Transdanubia) or Felsőzsolca (Northern Hungary). The largest power plant parks can be found near Mosonmagyaróvár and Komarno, while Romania's wind power plants are in the so-called Romanian Old Kingdom (Vechiul Regat), more specifically the plateau near the river of Bârlad in Moldavia and the eastern part of Dobrogea, which is closer to the Black Sea, are the most ideal areas for their installation.

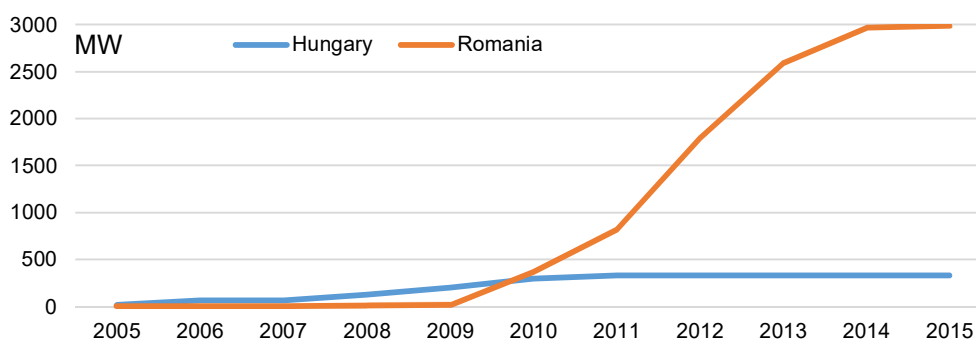


**Figure 8.** Hungary and Romania wind power plant vehicles production of energy in 2009 and 2015 between

Source: EUROSTAT (2017d) on the basis of their own edit

Figure 8 demonstrates Romania's large-scale exploitation of wind power. Before 2009, there were no wind power plants in Romania. For Hungary, however, the year 2008 was a very significant one in terms of wind power, when wind power plants of 60 megawatt performance in total were installed, although there have been no new ones since 2011. Thus currently the total performance of wind power plants is 330 MW, while in Romania only those established since 2014 have an aggregate output of 354 MW. Romania's rapid development has been steadily declining since 2014 but it still is at the forefront in terms of wind power exploitation in Eastern Europe and in the whole of the European continent as well. Romania's first wind power plant was built in 2004 but the real breakthrough happened in 2008 with the enactment of a statute (220/2008), that ended the priority of fossil fuels in the power generation of the country. This in the following year led to the commencement of wind power projects and they set the goal of renewable energies covering 24% of power generation by 2020. After 2009, Romania launched new power plants of at least 350 MW every year. In 2012 they established a 976 MW windmill, which is about three times the capacity of Hungary at present. One of Europe's biggest wind power plant parks can also be found in Romania, in Dobrogea. Near the settlements of Cogeaalac and Fântânele in Constanța County, the park has a 600 MW of total output (Dragomir

et al., 2016). It is worth observing the expansion of wind energy performance in the two countries in the past decade, that is, between 2005 and 2015 (Figure 9).



**Figure 9.** The wind power the increase of the two countries in between 2005 and 2015

Source: Szalai et al 2010 and Dragomir et al., 2016 on the basis of their own edit

Figure 8 shows that in 2009 in Romania a significant growth was in progress until 2014 and in contrast, in Hungary there was only a less considerable one from 2005 to 2010 followed by stagnation. Moreover, in Hungary issuing of licenses was suspended when the need for a new 1100 MW power plant came about in the country. Recent research has proved that at certain altitudes there is enough wind energy in Hungary, too, that can be utilised economically. It is clear, however, that Romania does a significantly better job at exploiting the possibilities of this energy source compared to Hungary and so is less dependent on energy, having a place among the last third of the EU 28 member states in energy dependency. Hungary's wind industry is currently obstructed by the 2011 suspension of license issuing and no advancement can be expected either due to the second investment in Paks.

### **The role of solar energy in the production of electricity in Romania and Hungary**

Solar energy is turned directly into electricity with the help of photovoltaic power plants. At the moment solar power does not play an important role in the energy sector in neither of the two countries. In 2015 photovoltaic power plants provided 1% of Romania's and 0.03% of Hungary's energy. In Hungary the southern region of the Great Plain would be the most ideal for the purpose but the point of these power plants would be the exploitation of less used lands. The country's biggest power plant of this sort is in Mátra, an establishment of 72,480 solar cells with a 15 MW total performance. It belongs to the Mátra Power Plant of Visonta which is one of Hungary's power plants that utilises most types of energies since besides solar power, it produces electricity by burning lignite, natural gas and biomass as well. Romania has been using solar energy since socialist times, although it is true that back then they mostly only built solar panels of which only 10% is still in use today. Yet, both of the countries are making progress in this respect as shown by table 1.

**Table 1.** Electricity generated in photovoltaic power plants

Measure: GWH

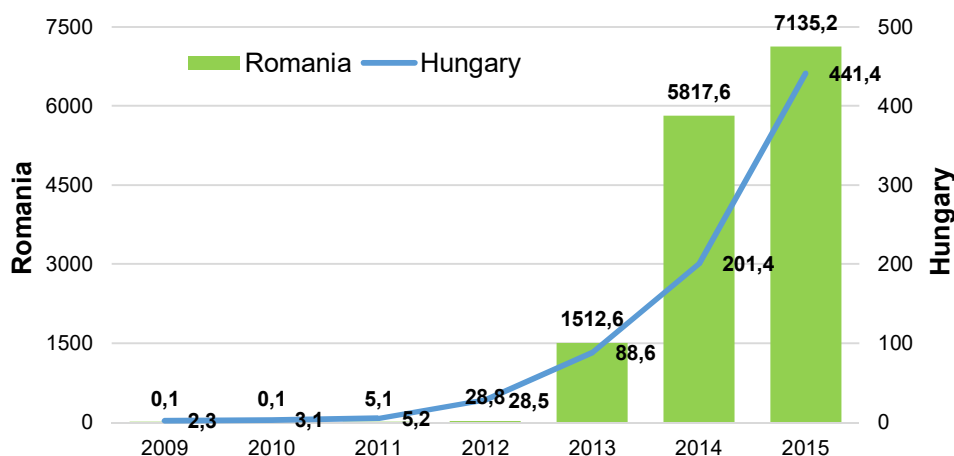
Country	2011	2012	2013	2014	2015	2016
Hungary	3,3	4,7	25	26,8	123	174
Romania	2	2	420	1 355	1 982	1 845

Source: Euro Barometer data based on own editing

Hungary's annual electricity consumption in 2015 was around 43,800 GW/h according to the data of MAVIR (Hungarian Electrical Works Private Limited Company) and according to the summary of ANRE (Romanian Energy Regulatory Authority) in Romania it was 57,700 GW/h. Even though it is obvious that only a small portion of this is from solar energy, the improvement is still unquestionable. The power plants in Mátra and Pécs meant a huge step forward when they were unveiled in 2015. The one in Mátra has a performance of 15 MW and the one in Pécs generates 10 MW of energy and they are to be followed by new ones in the future. The situation in Romania indicates that in the early 2000's it technically did not exist just like the wind energy industry and even though a smaller amount of money is invested in solar energy than in wind energy, it is making progress. In 2012, huge developments took place in Romania and in 2013 two large solar power plants were installed – one of them in Livada of 56 MW, and the other in Ucea de Sus of 55 MW performances. They are still two of the country's biggest photovoltaic power plants. Figure 10 demonstrates the tendency in the increase of the annually produced energy.

Solar energy is one of the energies that require the most expenses of instalment on the current energy market, especially the photovoltaic, that is, the electricity producing part. The costs can only be covered by large amounts of support and sometimes the consumers are made to pay the additional costs. It cannot be forgotten, however, that in this part of Europe the number of the hours of daylight is about 1800-2200 per year and during these hours, photovoltaic power plants produce electricity without any type of harmful emission, which will also be appreciated on the long run by future generations, not only in our present years.

Here I would also like to mention that geothermal energies of the two countries are not in direct relation with the electrical energy industry, it is utilised in spas and heating, thus saving money in the district heating systems. Conscious management is indispensable because thermal water has to be taken back to its source and over-exploitation cannot happen either otherwise the thermal water sources can dry out. The whole of the area of Hungary has favourable geothermal energies, Budapest is the only capital city in the world with a considerable thermal water resource besides other famous spas in Hajdúszoboszló, Hévíz and Gyula. Romania, especially in the Transylvanian regions, also has several thermal water sources, its well-known spas are Felix Spa (Băile Felix) and Hercules Spa (Băile Herculane).

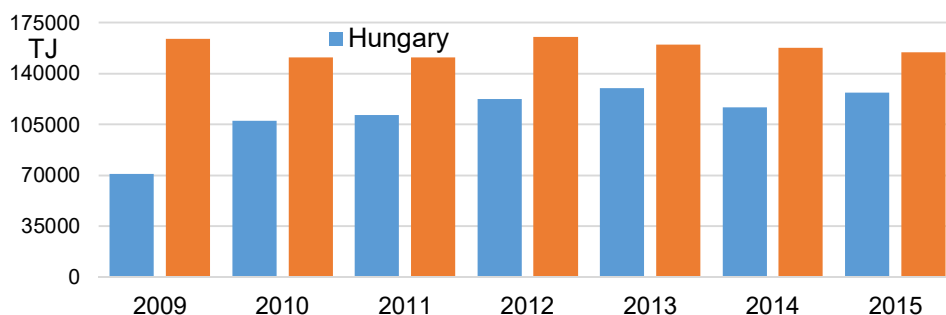


**Figure 10.** Hungary and Romania from 2009 to 2015 produced by photovoltaic power plants

Source: EUROSTAT (2017d) on the basis of their own edit

### Land use and biomass in Hungary and Romania

The comparison of the annual amount of energy gained from biomass can be seen in Figure 11, in which respect the two countries have the same results. Summaries on electrical energy in the two countries indicate that 3.8% (1661 GW/h) of Hungary's and 0.72% (421 GW/h) of Romania's annual need was covered by biomass in 2015 (MAVIR and ANRE).



**Figure 11.** Hungarian and Romanian biomass from 2009 to 2015

Source: EUROSTAT (2017d) on the basis of their own edit

In terms of total energy production, Romania beats Hungary. Both of the countries have been in a stagnating period in the recent years, the amount of energy generated from biomass has not really changed since 2012. In Hungary several power plants have been turned into ones of mixed heating in order to cut down on the emission of pollutant substances. Examples of this are the power plants of Mátra, Ajka and Pécs. Biomass in these power plants is used for the improvement of lignite that has a low heat of combustion in Mátra for instance, or to prevent running out of carbon resources in the Transdanubia. In Romania's case, the country's largest thermal power plant where they use biomass heating generating 22 MW of energy can be

found in Rădăuți in Suceava County. Another biomass burning factory is located near Reci, which is also a plant of high performance. Table 2 demonstrates land use in Hungary and Romania.

**Table 2.** Land use of Hungary and Romania according to major cultivation branches in 2014

Designation	Hungary		Romania	
	1000 hectares	%	1000 hectares	%
<b>Total area</b>	9 303	100	23 839	100
<b>Agricultural area</b>	5 346	57,5	13 830	58
<b>Plow-land</b>	4 405	47,4	8 778	36,8
<b>Wooded property</b>	2 064	22,2	6 791	28,5

Source: FAOSTAT on the basis of their own edit

The area of Romania is more than two and a half times the size of Hungary and it also has twice as many inhabitants, so it has better opportunities and a bigger market. The most important component of biomass is wood, of which both countries have large resources, especially Romania. A forest planted to provide firewood is a great investment for the environment because living trees absorb a lot of CO<sub>2</sub>, its heating value is much better compared to that lignite and its use generates less harmful substances. Hungarian biomass exploitation can profit from the large-scale use plough-lands: after harvesting the useful parts of crops, by-products such as corn stalk or straw can also be used in energy production. One of the disadvantages of biomass is that it cannot compete with good-quality natural gas as the transportation and burning of gas is more economical. Power plants with biomass heating should be installed close to the energy sources.

### Summary

My research was carried out because it was interested in Hungary that the ratio of the involvement of renewable energy sources in energy management in Hungary and Romania in neighboring Romania. The main segment of my research was the extent to which renewable energy sources were involved in electricity management and where there are still hidden reserves for Romania and Hungary. It should not be forgotten that renewable energy sources should be included in the energy mix as much as possible, as renewable energy generating plants produce electricity without any harmful emissions, this benefits not only the now but the future generations will appreciate it.

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## FORMATION OF MIGRATION POTENTIAL IN HUNGARY FROM 2000 UNTIL TODAY

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**Abstract:** *When hearing international migration we can think of two things. One is the emigration process while the other is the wave of refugees. In our study we examined the changes of the number of employees emigrating from Hungary from 2000 until today. Examining the migration potential can be viewed as a very important topic nowadays in Hungary, since the rate of Hungarian emigrants started to grow after 2006 and the rate of growth got faster after 2010. The reason of fastening was the opening of the Austrian and German labor market. The actuality of the topic lays in the fact that international emigration melts the labor market's processes, influences the given country's employment level, moreover it has an influencing role on the rate of wages. Emigration from the given state can have several reasons: natural damage, war, marginalization, economic reasons, etc. In our study we examine emigration caused by economic reasons. We have to take into consideration that measuring emigration is hard in every country (in this way, in Hungary as well), due to the deficiency of data. The reason of deficiency is that those who leave for abroad often forgot to report their leaving for abroad. The reason of this is that from March 1, 2013, only the permanent foreign settlement should be reported towards the administration (District Office, Consulate). Earlier, the temporary (more than 3 months) settlement was also obligatory to be reported. Many leaving Hungarian forgets that that working on abroad for more than 3 months should be reported in every case towards Social Insurance organizations and Tax Authorities. That is why we emphasize that the introduction of migration potential made by us does not show any direct correlation with the actual migration, however, with the help of this study, the expected measure of moving could be recognized along with the expected composition of emigrants.*

**Keywords:** *migration; migration potencial; Hungary; emigration.*

**JEL Classification:** O15.

### 1. Theory

Emigration has two groups: permanent and temporary emigration. Permanent emigrants leave the country for a long time; settle down in a foreign country with their house holdings and the chance of returning home is minimal. In opposition to them, temporary emigrants are those, who move to abroad and keep up the chance of returning and also those are in this group who are part of a foreign household (we call them commuters) (1. table).

Based on the different types of emigrants, the database can be found at different places. We do not have any certain, official database about permanent emigration for a long term since host countries do not make statistics for this purpose. There are a minimal information in the host countries (they provide information in different



sections with different frequencies) about how Hungarian resident is there, however, the overall number of people cannot be collected in this way.

**Table 1:** Types of international emigration and database connected to them

Emigration		
permanent	temporary	
does not plan to return	comes with moving	commuting
Based on the database of host countries (Immigration, Statistical Office, etc.)		National labor research (MEF)

Source: Own editing

The emigrational moves according to Mirror Statistics are limited to the temporary/commuting type based on the reported information.

About the temporary emigrants we are informed from different labor market researches. According to the data of temporary emigration which came with settlement based on the census data of World Bank (2011) showed that 462 thousand Hungarian (nearly 5% of the population) lived abroad from which 400 thousand settled down in one of the countries of OECD (OECD, 2011). This 85-87% OECD share is true for all of the past years,

According to the data of the Mirror Statistics (2014), the Hungarian population, consisting of 330 thousand people living in Europe is younger and more skilled from the national average. In 2014, Germany, Ireland and the United Kingdom were targeted more by men, while Italy, Austria, Switzerland and Spain were targeted by women in greater numbers (KSH, 2015).

According to the data (2015) of EU member states, the number of Hungarian citizens were 310 thousand in European countries, which is more with 48 thousand than in the previous year. From the 370 thousand, 41% went to Germany, 23% to the United Kingdom and 15% to Austria. According to the data, to the end of 2015, the attractiveness of Germany decreased somewhat compared to previous years; however the attractiveness of the UK grew. New emigrational targets in the year 2016 are Netherland, Ireland and Denmark (which were insignificant before).

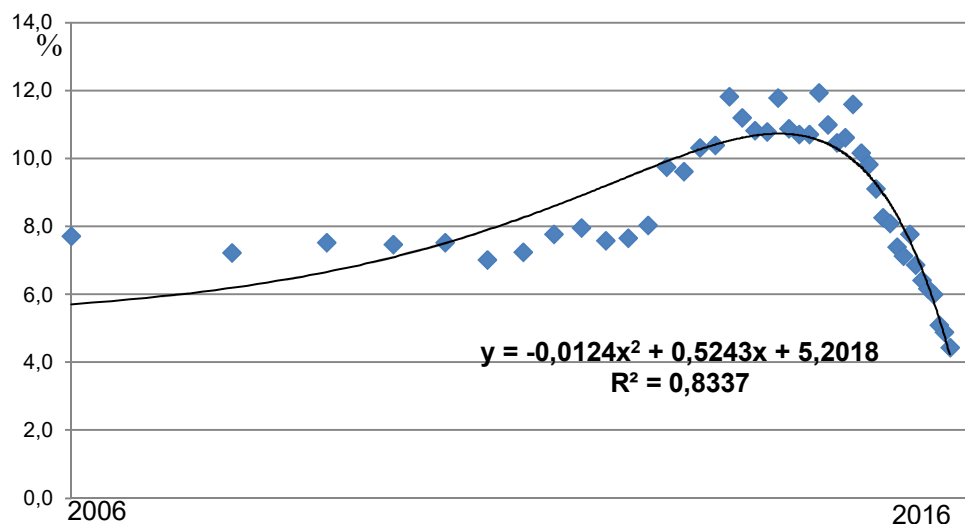
In opposition, some literature processing writes about 1-2% of Hungarian resistant of a foreign country (Blaskó – Ligeti – Sik, 2014; 2011. census; Blaskó – Gödri, 2016). According to mirror statistics, the emigrants staying on abroad have a 3—4% share. One of Hárs's research (2016) examined the member states of the European Union and it concluded the actual situation in relevance of Hungary as well. According to his opinion, the emigration share of Hungarians is 3% and only the Czech, Slovakian and Slovenian values are lower.

The constantly changing number of commuters is not recorded by Hungary; hence it would be hard to keep count of them from time to time. On some places it is possible to get information about commuters; however there are no number data of those people who lives in a one-man Hungarian household but works abroad. Data concerning commuters can be known from Labor researches that at the end of 2013,

there were 100 thousand commuters (work on a foreign site but registered in a domestic household and their income are present in Hungarian household.) Obviously there are passages between the groups from time to time and the data provide only approximate information from the number of members in each group. Emigration with the aim of working according to Dustmann-Weiss (2007) can be viewed as temporary in majority since one aim of emigrants is to gain experiences and also, contractual period holds those who work abroad. Temporary emigration in many cases is abolished completely if the emigrant returns to Hungary or the temporary emigration changes to a longer term settlement.

## 2. Start of working emigration in Hungary

In a European Union comparison, since the regime (since approx. 1990), Hungary belongs to the countries with a low but positive international emigrant balance. The growth of the rhythm of emigration fastened in the past years. Foreign working started in 2004, however bigger changes in Hungary can be experienced since 2008. One main reason is that from 2008, the rate of unemployment started to grow in Hungary. In the majority of host countries, the rate of unemployment was lower than in Hungary (in Ireland, 4,5% in the beginning, later 6%, Germany approx.. 6%, United Kingdom approx.. 4,5-6%). The low unemployment rate and the high chances of job-finding could be positive for emigrants.



**Figure 1:** Formation of the unemployment rate in Hungary between 2006-2015

Source: Own calculation based on the database of KSH (2017)

Another (main) reason which is attractive in case of emigrants is the differences in income. However it can be stated that the differences in income should be much higher, since the moving/commuting and the costs of integration should also be financed from a higher salary.

Besides these, the social supply system, the development of educational system and the general political mood in the host countries can be positive.

Employees, who count as a migrant, emigrating to abroad are called economic migrants by the literature. The most important target countries from Hungary were Austria, Germany and Great Britain regarding the past years (TÁRKI, 2016; Galgóczi – Leschke, 2012).

While those with a lower qualification goes to Austria (nearly 2/3 of emigrants have a middle-school degree) and Germany (nearly 2/3 of immigrants are skilled workers), higher graduates (or over-educated) go to the United Kingdom. (Hárs – Simon, 2015).

The correlation also conspicuous based on different researches that while the emigrant to Austria and Germany consists of families of 5.6, those who emigrates to Great Britain are from 1 or maximum 2 member households.

One reason of emigration to host countries is that foreign workplaces provide a higher salary opportunity for the skilled workers, so in the year 2015 in Hungary, those skill shortages appeared for which an employee could not be founded. Economists predicted in the beginning of 1990 that the lack of checking of borders a powerful migration pressure can be expected in the future (Layard et al., 1992).

Another reason behind emigration to abroad because of work is that at the same time with the regime, country borders became free; there is no bigger check at borders so the international migration procedure could grow (emigration and immigration). Examining the data of the last 10-15 years, emigration has a minimal significance before 2000's; therefore there were no willingness for mobility from the side of Hungarian residents. This rate is changed today since their share grew.

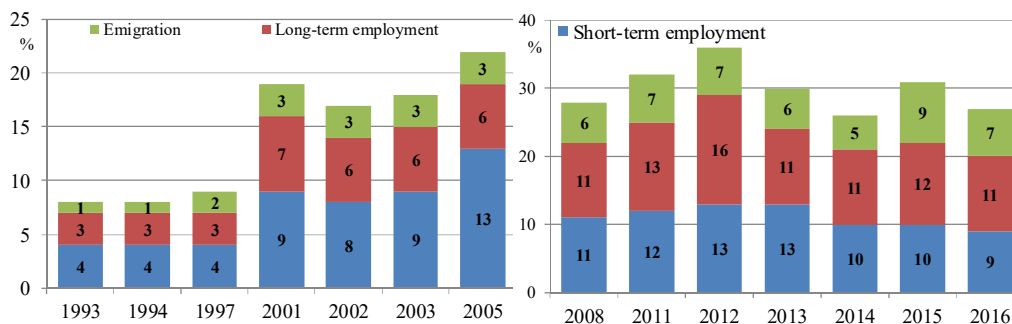
It can be stated, that unemployment grew in Hungary after the start of the crisis, so the encouraging effect of emigration strengthened. The emigration for abroad of Hungarians (especially for a working purpose) started from 2007, which became more powerful from 2011 and from 2013, the intensity of the process moderated somewhat.

### **3. Migration Potential in Hungary**

Before the time overview we consider it worth to discuss what migration potential actually means. This definition shows the measure of foreign working and the intention of emigration in the percent of the population.

The detailed analyses of the migration processes are greatly influenced by that trustworthy data are only available in a limited number. In our calculations, we get the data concerning Hungary in a special way. In some parts of calculation we used the number of visitors available in host countries, while at other parts we took the number of emigrants from Hungary into consideration from the mirror statistics. Mirror statistics creates a matrix from the number of those who moved to the more developed countries of European Union from at least one year from each providing countries. In case of missing data, we took the database of EUROStat into account. Because of the deficiencies of the data, we cannot make greater volume forecasting, since the data are not suitable for this (does not covers fully the number of emigrants).

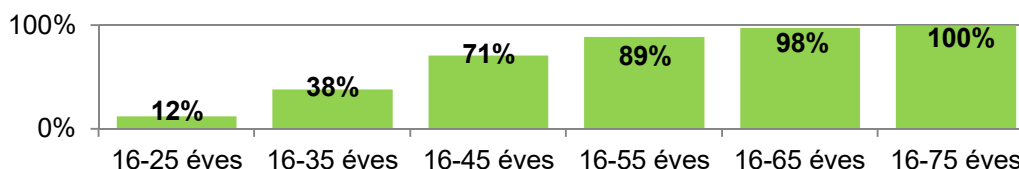
It can be seen in the period between 1993 and 2016 (1. figure), that the initial, low emigration (8%) doubled for 2001 (19%), while it almost tripled for 2005 (grew to 22%). The highest value of migration potential was in 2012 with 36% which, for today, decreased to 27%. The short and long term working measured the same according to the data of the last 10 years between the potential, while emigration had a somewhat less share.



**Figure 2:** Migration potential of the Hungarian population between 1993 and 2016  
In Hungary

Source: Own editing based on the data of Sik – Szeitl (2016)

Examining the composition of short term emigrants it can be stated that in a decisive majority, young ones are in the database, the number of those who are from the age group above 55 is insignificant. The number of emigrants give 771 of emigrants up to the age of 45, from which 12% are between 16 and 25 and 26% are from the age group of 26-35. 71% of emigrants are.



**Figure 3:** The Hungarian population's migration potential of developments in Hungary in 2016

Source: Own calculation based on the database of TÁRKI

Viewing the whole amount of emigration for long and short term in an age-group-sectioning, those who are under 30 gave 44% of the majority. Also, it is interesting information that 75% of the emigrant Hungarians is not 40 yet.

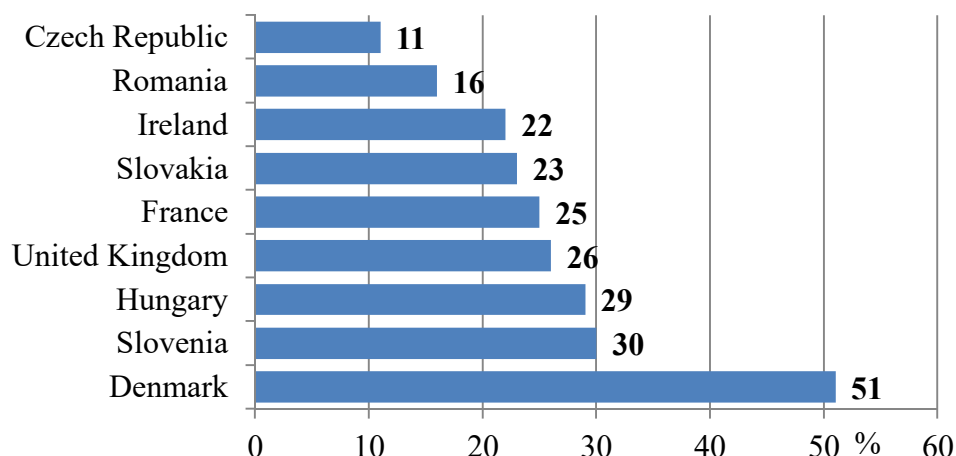
Migration potential is much typical for those who wish to aim development and better living standards in the future. Emigration is not typical for those Hungarian residents who already have a house or lives in better standards. As for territorial distribution, the citizens of Budapest, West Dunántúl and Easter Hungary are the most responsive for going for a shorter time.

Longer working in abroad cannot only be tracked back for economic reasons but for family status or lower education.

Emigration from Hungary started later compared to other European Union countries. Besides our country, from Romania, Bulgur and from Baltic countries with a higher rate of unemployment, following the regime a higher rate emigration started.

Regarding the migration willingness of the member states of the EU it can be concluded that in 2009 the migration potential of Hungary (29%) was above the EU's average (17%) (2. figure). The highest migration willingness was typical for Denmark (51%), and for Estonia, Sweden, Latvia and Lithuania (35-36%). Hungary

took place in the midfield with its 29% share besides Slovakia, United Kingdom and France. Bulgaria, Romania, Spain, Germany and the Czech Republic are below the European Union average.



**Figure 4:** Migration potential in each countries of the European Union

Source: Own editing based on Special B. (2010)

### Summary

It can be easily stated by examining different researches dealing with migration that approximately 3% of Hungarian citizens work abroad. It can be experienced from different summaries that one main territorial unit of emigration is Budapest and its surroundings. As for demographical data, emigrants are mostly men (53% of those who leave the country) who are from a household of 1 or 5-6. The emigration of households of 2-3 or those who bring up their kids are not significant. Those who live abroad covers the younger (especially single), skilled age group. According to the data of 2016, the number of graduates is the highest from the examined target countries in the United Kingdom (36%). Germany and Austria is highlighted in employing skilled workers in the circle of emigrant Hungarians.

It can be seen in our study that before 2000, the number of emigration from Hungary because working was very low. A bigger volume of emigration can be placed to 2010 where the doors opened towards the labor market of Austria and Germany.

However, when doing our research we did not care about the number of those who are abroad because of studying (because of the lack of data), but it can be stated based on studies that the majority of (Hungarian) students learning abroad are planning their life abroad.

It can be seen according to the correlations written in our research that the mostly effected migration layer are the young ones (75% of emigrants are under 40), singles (64% of emigrants are not married) and the skilled workers and graduates.

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## IMPLEMENTING COMPETITION POLICY. COMPARATIVE STUDY - ROMANIA AND BULGARIA

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**Abstract:** *The competition policies play an important role in the European Union, because only a competing market can generate competitiveness. Only a loyal competition can bring benefits to the consumers and the companies that are present on the respective market. In this way, the European Commission closely collaborates with competition authorities in each member state, to implement an adequate competition policy. In this paper, we propose to analyze by comparison the way in which Romania and Bulgaria have managed to implement competition policies after having joined the European Union. The reason for selecting these two countries is that both have joined the EU in the same year (2007), thus the study could be carried out over a homogenous timeframe. The research methodology was based on analyzing yearly reports published by the Competition Council in Romania and the Commission for Protection of Competition in Bulgaria. Despite the limitations encountered during the research, we managed to create a database for a period of 9 years, between 2007 – 2015. The study followed these directions: anti-competition practices (cartels and abuse of a dominant position), mergers, sanctions and fines given out by competition authorities and the number of investigations started by these authorities. The results of the study have highlighted a series of interesting aspects, but one aspect got our attention the most: the efforts undertaken by competition authorities to implement competition policies as well as possible. Definitely this would not have been possible if the Competition Council in Romania and the Commission for Protection of Competition in Bulgaria have not started early to harmonize their national regulations with the European Legislation regarding competition. As proof, the study pointed out that in the timeframe we have analyzed, the Romanian authorities have issued 481 decisions regarding breaches in competition regulations and mergers, while the Bulgarian authorities have issued 767 decisions. By realizing the importance of applying an adequate competition policy, the authorities in each country have taken as their objective the permanent improvement of national regulations regarding competition, as well as to harmonize it to the European standards.*

**Keywords:** *competition policy; cartel; abuse of dominant positions; mergers; decisions.*

**JEL Classification:** *L40; F15; K21.*

### 1. Introduction

At the European Union's level, competition policy plays a very important role, fact proven by the European Commission which oversees the permanent improvement of competition legislation. Competition policy in the European Union is built around three main directions (Davison and Johnson, 2015:1). Firstly, competition authorities

use all necessary instruments so that the internal single market can benefit from an adequate competition environment. Loyal competition leads to a healthy competitive environment between companies, which in turn generates higher quality services and products, for a lower price. The second direction is concentrating on protecting consumers, especially natural persons, regarding the anti-competition practices manifested by certain companies. The third direction deals with the international side of competition policies. The behavior of European companies that carry out their activities outside the European Union, as well as the behavior of non-European companies that have business in the European Union is analyzed.

We can say that European Union citizens can reap the benefits only when the European market is a competitive one – this can only happen when the competition between the companies is intensified (Vives, 2009:1; Motta, 2005).

In the European Union, the European Commission and the competition authorities of each member state regulate the policy. National competition legislation of European Union member states is harmonized with the European legislation. We need to make the following remark: the authority responsible for competition in each EU state is responsible for implementing competition policies at a national level, whereas the European Commission handles the implementation of these policies at a European level.

Anti-competitive practices or economic mergers are instrumented as follows: when they affect only the national market of a EU member state, then the competition authorities in that state are responsible to solve the situation, while if the whole EU market is affected, the European Commission steps in. Regardless of who is responsible to solve the situation, we need to mention the fact that while the research is in progress, the European Commission and national authorities are collaborating permanently. In support of this collaboration, the European Competition Network has been formed.

In this paper, we have set as objective to analyze by comparison the way in which Romania and Bulgaria have managed to implement the competition policy, after joining the European Union.

At a European level, the legislative competition framework is represented by Articles 101-109 of the Treaty on The Functioning of the European Union.

In Romania, the competition Law no. 21 from 1996, republished in 2014, is the one responsible with competition policy regulations. The cartel is regulated by Art. 5 of the same law, while abuse of a dominant position is regulated by Art. 6 of the same law. Mergers are regulated by Art. 10-15 of the Competition Law no. 21, republished in 2014.

In Bulgaria, the competition policies regulation is done by the Law on protection of competition, issue 102 of 2008. The cartel and abuse of a dominant market position fall under Art. 15 and Art. 19-20 of the same law. Mergers in Bulgaria are regulated by Art. 22-26 of the Law on protection of competition.

The harmonization of competition policies and laws in these two countries with the European legislation began a long time before they were accepted in the Union. In 2007, the year when these states joined the European Union, they were prepared to face the challenges the single market would pose. In Romania's case, the harmonization started from 2003.



## 2. Research methodology

The main selection criteria of these two states – Romania and Bulgaria – was based on the year they joined the EU. Both joined in 2007, which allowed us to make an adequate comparison of the way in which these countries managed to align and later apply the European legislation relating to competition.

The study is focusing in analyzing the way in which the competition policy has been implemented in these two states, over a period of 9 years, from 2007 until 2015. The required database for this study has been created based on yearly reports published by the respective competition authorities in each country.

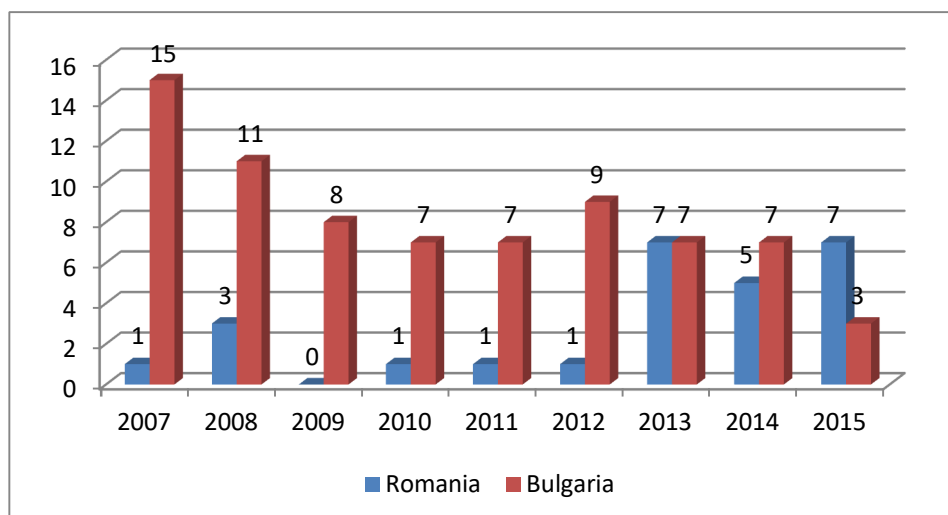
During our research, we have encountered a series of limitations. One aspect was related to the impossibility of extending the study on a 10-year period, because the last reports have been published in 2015. Another aspect is the fact that data has been collected with difficulty, since the Romanian and Bulgarian reports are structured differently, or the structure of the reports differed from year to year within the same state. A last obstacle that we encountered was that for the year 2014, the Bulgarian authorities have not published their report in English, which meant that the necessary data for that year have been picked up with greater difficulty from the 2015 report.

## 3. Results

The results of the study have been structured on four directions: anti-competition practices, mergers, the value of fines and the investigations started by competition authorities. We need to state that the authority in charge of implementing competition policy in Romania is the Competition Council, while in Bulgaria, it is the Commission for Protection of Competition.

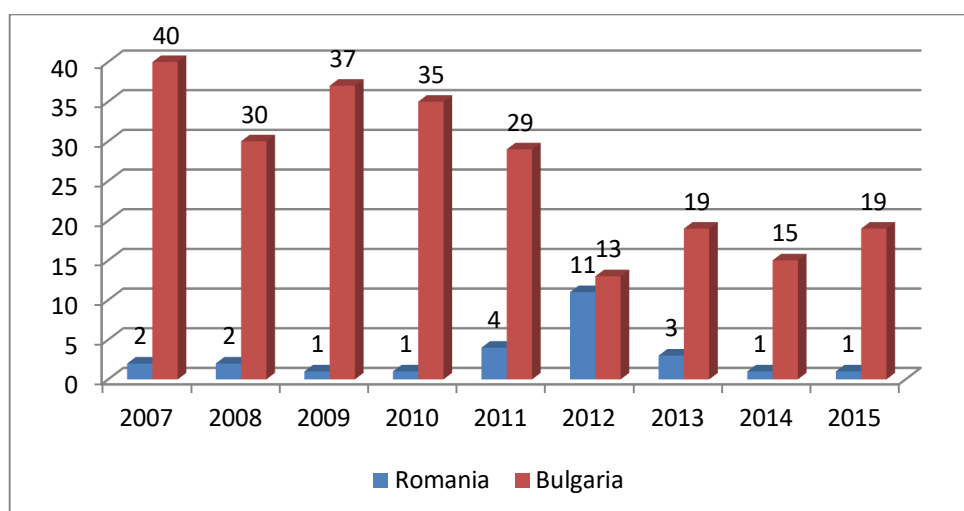
In Figure 1, we can see the evolution of decisions issued by national competition authorities, regarding anti-competition agreements. Decisions for horizontal and vertical agreements have been taken into consideration. Thus, we noticed that during 9 years, the number of decisions regarding cartels issued by Bulgarian authorities was approximately 3 times higher (74 decisions) than the ones issued by the Competition Council in Romania (26 decisions). 2015 was the only year in which Romanian authorities issued more decisions regarding cartels, than their Bulgarian counterparts. In the timeframe we analyzed, the highest number of decisions issued in Romania was reached between 2013-2015, while in Bulgaria the maximum was reached immediately after joining the European Union, in 2007. Also, in 2009, the Competition Council in Romania did not issue any decision regarding anti-competition agreements.

The second figure points out the evolution of decisions issued by the Competition Council and the Commission for Protection of Competition regarding the abuse of a dominant position. The Bulgarian authorities have issued 9 times more decisions (237 in total) than their Romanian counterparts (26 decisions) between 2007-2015. We could easily observe that the number of decisions issued in Bulgaria was higher in each year of the analyzed period, than the number of decisions issued in Romania. The highest number of decisions regarding abuse of a dominant position issued in Romania was in the year 2007. In Bulgaria's case, we can notice a downward tendency over the 9-year period, in regards to decisions issued for abuse of a dominant position.



**Figure 1:** The evolution of decisions issued by national competition authorities regarding cartels, in the period 2007 – 2015

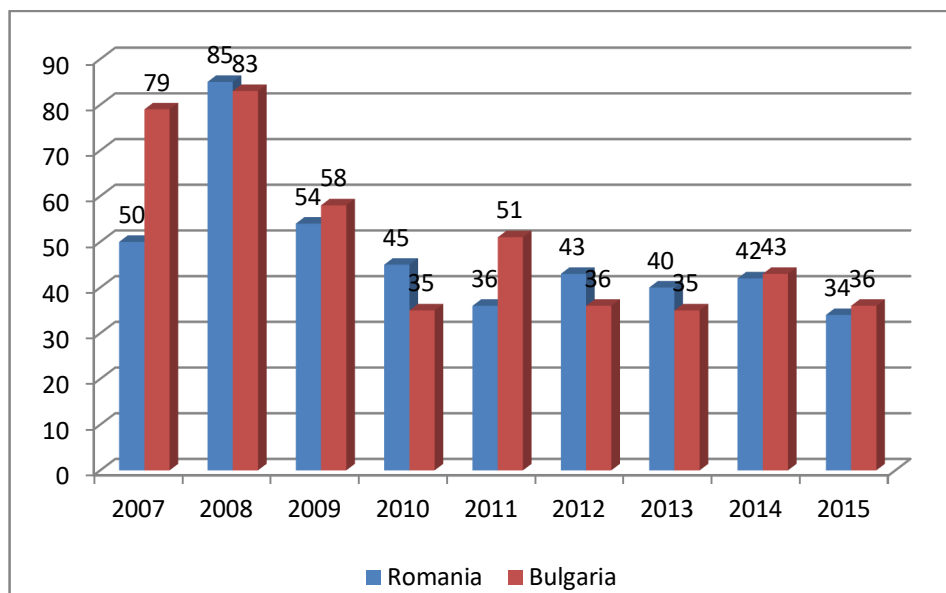
Source: made by the author based on statistics gathered from annual reports of the national competition authorities, from documents available at: <http://www.consiliulconcurentei.ro/en/publications/annual-reports.html> and <http://www.cpc.bg/general/publications.aspx>



**Figure 2:** Evolution of decisions issued by national authorities regarding the abuse of a dominant position, in the period 2007 – 2015

Source: made by the author based on statistics gathered from annual reports of the national competition authorities, from documents available at: <http://www.consiliulconcurentei.ro/en/publications/annual-reports.html> and <http://www.cpc.bg/general/publications.aspx>

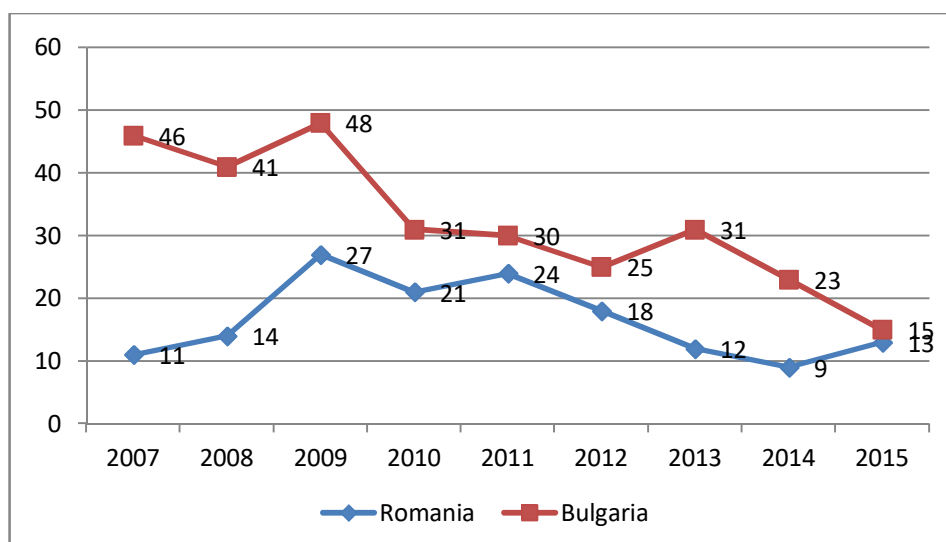
In the case of Figure 3, we can note the evolution of decisions taken by national competition authorities (Romanian and Bulgarian) in regards to economic mergers. In their case, different from anti-competition practices, we can observe that the total number of decisions is similar in both Romania and Bulgaria's case: 429 decisions for Romania and 456 for Bulgaria. The highest number of decisions regarding mergers have been issued in 2008, in Bulgaria and Romania.



**Figure 3:** The evolution of decisions issued by national competition authorities in regards to mergers, in the period 2007 – 2015

Source: made by the author based on statistics gathered from annual reports of the national competition authorities, from documents available at: <http://www.consiliulconcurentei.ro/en/publications/annual-reports.html> and <http://www.cpc.bg/general/publications.aspx>

Figure 4 – The evolution of investigations started by national competition authorities between 2007 – 2015 shows the way in which competition authorities managed to notice and later to react to the disloyal behavior of companies operating in each country. In the period we have analyzed, Bulgaria stands out by the number of investigations started by the Commission for Protection of Competition – a number which is clearly higher than in Romania's case. Still, in Bulgaria between 2007 and 2015 we can observe a downward tendency regarding investigations. In 2015 the number of investigation started was 3 times smaller than compared to 2007. In Romania, 2014 was the year with the smallest number of investigations started and 2009 represented the year with the highest number of investigations.



**Figure 4:** The evolution of investigations started by national competition authorities in the period 2007 – 2015

Source: made by the author based on statistics gathered from annual reports of the national competition authorities, from documents available at: <http://www.consiliulconcurentei.ro/en/publications/annual-reports.html> and <http://www.cpc.bg/general/publications.aspx>

**Table 1:** The value of fines given by national competition authorities in the period 2007 – 2015

Year	Penalty amount (euro)	
	Romania	Bulgaria*
2007	29.720.000	2.337.151
2008	30.800.000	4.402.668
2009	2.377.471	7.371.249
2010	31.490.000	2.483.378
2011	294.164.875	3.228.863
2012	6.781.160	11.640.311
2013	19.637.602	4.390.979
2014	41.542.138	17.339.625
2015	53.921.382	12.711.898
<b>Total</b>	<b>573.167.061</b>	<b>65.906.122</b>

Source: made by the author based on statistics gathered from annual reports of the national competition authorities, from documents available at: <http://www.consiliulconcurentei.ro/en/publications/annual-reports.html> and <http://www.cpc.bg/general/publications.aspx>

\* calculated by the author based on the average rate available on the National Bank of Romania's website: <http://www.bnr.ro/Raport-statistic-606.aspx>

The situation of fines applied by national competition authorities, between 2007 – 2015, is presented in Table 1. In the analyzed period, it is clear that the value of fines given out by Romanian authorities is almost 9 times higher than the value of

finances given by the Commission for Protection of Competition in Bulgaria. We also notice that half of the total value of fines applied in Romania was for fines given in 2011. In Bulgaria, the highest value of fines has been reached in 2014.

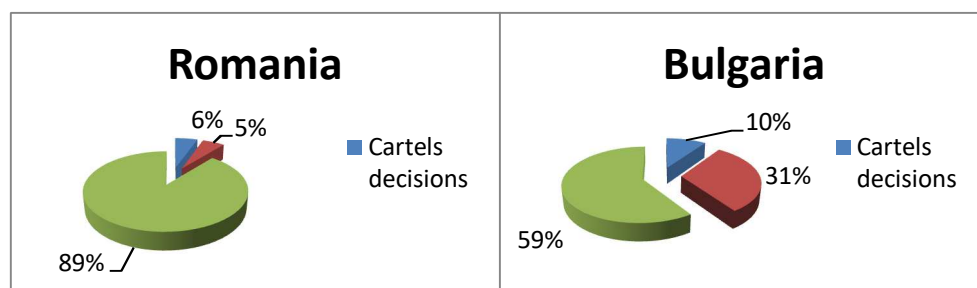
#### 4. Conclusions

The results of the study speak for themselves, the Competition Council in Romania and the Commission for Protection of Competition in Bulgaria are marking great efforts to implement competition policy in their countries.

The anti-competition practices can sometimes be very hard to discover, especially cartels, but even more difficult to fight against. Despite this, competition authorities in Romania and Bulgaria have shown to possess perseverance in their line of work, as the results presented in the study can show.

In Figure 5 we can see the weight of decisions issued by national competition authorities regarding anti-competition and merger practices, between 2007 – 2015. In Romania and Bulgaria, the biggest weight is represented by decisions regarding mergers. Considering the resource consumption generated by these decisions, national competition authorities are working on simplifying procedures in regards to notifying about the existence of a merger.

In Romania, in the 9-year period we have analyzed, the smallest weight is represented by decisions regarding abuse of a dominant position, while in Bulgaria the smallest weight is represented by decisions regarding anti-competition practices.



**Figure 5:** Weight of decisions issued by national competition authorities, in the period 2007 – 2015

Source: made by the author based on statistics gathered from annual reports of the national competition authorities, from documents available at: <http://www.consiliulconcurentei.ro/en/publications/annual-reports.html> and <http://www.cpc.bg/general/publications.aspx>

Based on our study, we could also analyze the sanctions given by the Competition Council in Romania and the Commission for Protection of Competition in Bulgaria to companies that have broken the rules of competition. Unfortunately, there is a lack of information in both countries' case regarding how many fines have been paid or by how much these fines have been reduced after the Court of Justice's decisions, following the appeal made by the companies.

We also must not forget that Romania is a larger country than Bulgaria. It is twice the size of Bulgaria in terms of land mass and population.

Competition authorities of both states are aware of the importance of competition policies, and as such, have agreed to assiduously work in order to improve and harmonize their policies with the European Union legislation.

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**Abstract:** *In this article, the author performs an analysis of the energy market and, in particular, of the natural gas in the European Union in the context of the energy policy of liberalization of the European market and of sustainable development. The economic and financial crisis of 2008 had as a consequence the reduction of the world price of oil and, implicitly, of natural gas. The complexity of issues related to energy production, transport and energy consumption has increased greatly over the last decades, as global environmental issues, climate change and natural resource depletion have intensified. In addition, the European Union faces some specific problems, the most serious of which is related to the increased dependence on imported energy resources. A projection of energy resource costs by 2035 shows that there is a very good period for countries with natural gas reserves. The evolution of consumption in relation to the unresolved resources could generate a crisis on the primary energy market around 2035. After this year, for natural gas, European forecasts are to reduce the probable reserves and apply more expensive extraction technologies. Romania is the country with the most developed energy market and the least import dependence. Given that gas production and storage taxes have increased, the gas sales price of domestic production exceeds the price of imported gas. Under these conditions, the profitability of natural gas extraction while having a sustainable development becomes subject of analysis. With a 2050 energy scenario in Romania, natural gas, current resources and new discoveries in the Black Sea basin have been found to be used as a substitute energy for sustainable development amid a reduction in future resources.*

**Keywords:** *economic crisis; energy mix; energy strategy; natural gas market.*

**JEL classification:** Q41.

### 1. Generally Introduction

A quarter of a century ago, the European Union was characterized by the existence of several national gas markets, not at all or poorly interconnected, dominated by state giants that held the monopoly on all related activities: production, transport, import, storage and distribution. However, the high consumption of natural gas in the Member States of the European Union has led to a dramatic increase in imports. Thus Member States have begun to become increasingly dependent on the supply of natural gas by contracts concluded over several decades, where the price was based on the price of crude oil and the importer undertook to pay a certain minimum amount of natural gas.

For the deregulation by liberalization of the natural gas market, the European Commission adopted three directives, approved in 1998, 2003 and 2009, which separated activities such as the production of gas distribution.

The global financial crisis of 2008-2009 and the subsequent economic downturn have affected most of the world, whether developed, emerging or, above all, poor,



with quite serious effects on energy issues. The most important consequence is the diminishing demand for oil as global economic activity has slowed down its growth. Thus, some businesses have gone bankrupt, many industrial capacities have reduced their consumption due to diminishing orders, and household users have also passed on energy saving. Other consumers have focused on less polluting forms of energy, such as natural gas, nuclear energy, renewable energy sources, or increased their share in the energy mix.

Natural gas is the main energy source for EU manufacturing industries and home heating. It is also the main substitute for renewable energy sources because it is a relatively clean source of energy and can potentially contribute to reducing greenhouse gas emissions. Two thirds of The European Union's natural gas demand is covered by imports, marking a high level of dependence.

## **2. Sustainable development of the gas market in the European Union European**

### **2.1. Regulations on energy and climate**

EU countries have committed themselves to transforming Europe into a highly energy-efficient, low-carbon economy. The EU has also set itself the target of reducing greenhouse gas emissions by 80% to 95% by 2050 compared to 1990 levels.

The first EU climate change and energy package was adopted in 2008 and set targets for 2020 (2020 Strategy). The EU is making significant progress towards achieving these goals, but in order to provide investors with greater certainty, an integrated framework is needed to be in place by 2030. The EU therefore approved the climate and energy policy framework for 2030, which sets out a number of key objectives and policy measures for the 2020-2030 period (European Council, Climate and Energy Policy Framework for 2030).

The European Union and its 28 Member States are signatories to the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, as well as to the new global agreement on climate change in Paris.

On 15 December 2011, in accordance with Article 304 of the Treaty on the Functioning of the European Union, the European Commission consulted the European Economic and Social Committee on the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Energy Perspective 2050.

By 2020, energy developments are already largely defined by existing plans and policies implemented to achieve the 20-20-20 Strategy objectives.

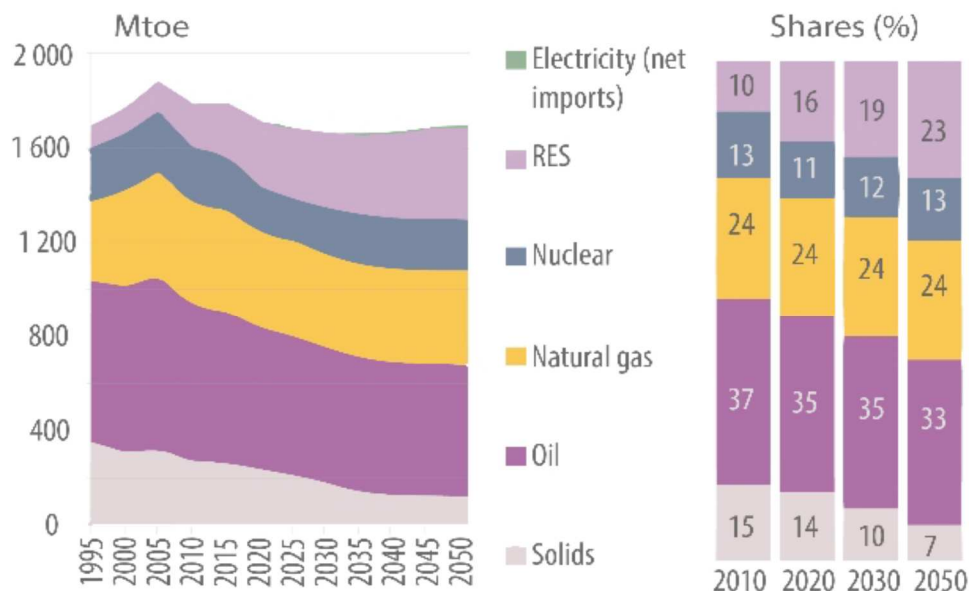
Although the Treaty of Lisbon has extended the Commission's powers in the field of energy policy, it has reserved to the national governments the specific issue of the energy mix, so that any action at European level must respect this division of responsibility.

According to IEA66 data, the evolution of consumption in relation to the identified unresolved resources could generate a crisis on the primary energy market around 2035. A projection of energy resource costs by 2035 shows that there is a very good period for countries that have deposits of the natural gas, with demand rising continuously for the next 14 to 15 years. After 2025, demand for gas will stabilize.

## 2.2. Consumption and production of primary energy in the European Union

The share of natural gas in the EU's energy mix is almost a quarter. In accordance with

Long-term scenario of the European Commission, the share of natural gas in the EU's energy supply is almost stable, and will remain at around 24% by 2050 (Figure 1).



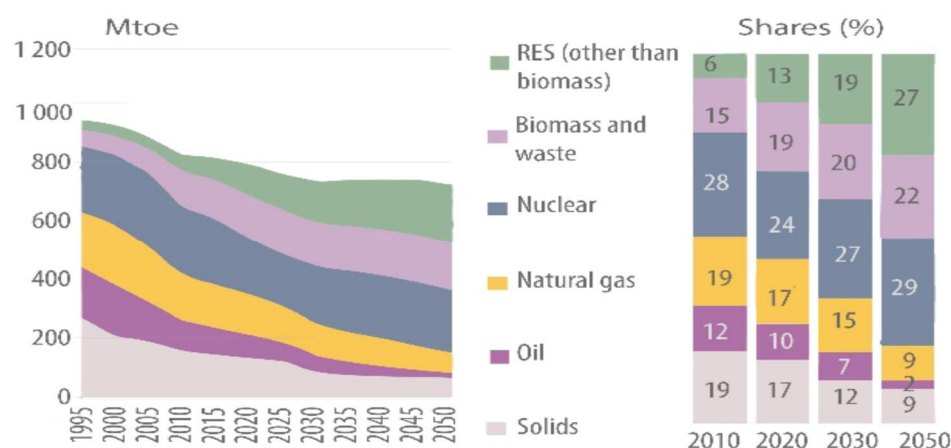
**Figure 1:** EU primary energy supply in 2050

Source: European Commission

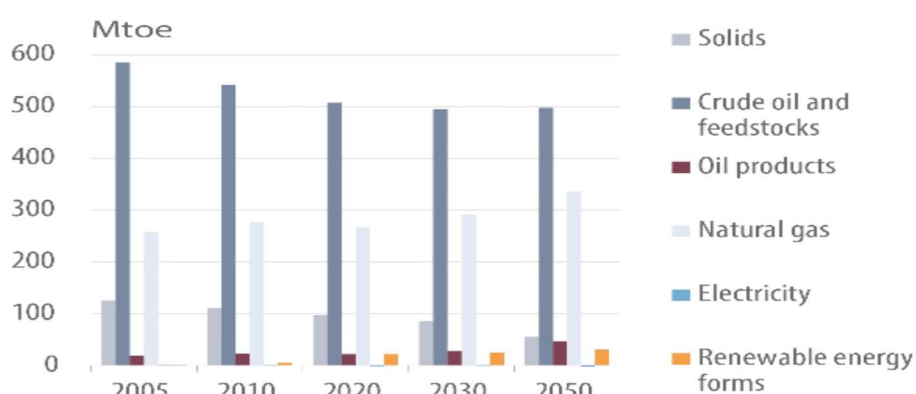
The share of solids and oil in the energy mix will decrease while renewable energy sources will increase significantly from 6% in 2010 to 27% in 2050. However, EU primary energy production is on a downward trend. The share of natural gas in total energy production is expected to decrease from 17% in 2020 to 9% in 2050, reflecting the exhaust of domestic gas (Figure 2).

The origin of gas imports in the EU-28 has changed somewhat in recent years, so that Russia has maintained its main supplier position by 2013. The export quota of Russian natural gas to the EU 28 has decreased from 44.8 % To 30.1% between 2003 and 2010, but this trend was reversed with increases that subsequently led to a 39.3% share in 2013. Between 2014 and 2015, as a consequence of Russian gas transport issues Through Ukraine, Norway became the first supplier of crude oil and gas imports to the European Union, ahead of Russia.

Changes in energy production and supply are also reflected in imports, as shown in Figure 3.



**Figure 2:** EU primary energy product in 2050  
Source: European Commission



**Figure 3:** Importuri de energie in UE in 2050  
Source: European Commission

Since natural gas remains one of the dominant energy forms, diminishing domestic reserves will lead to an increase in gas imports. Although oil reserves are also downsizing, oil imports to the EU are expected to decline, reflecting lower oil and coal use in primary energy supply replaced by renewable energy to reduce GHG emissions. In the coming decades, gas imports will be even higher than they are today (Figure 3).

Therefore, security of gas supply at affordable prices is likely to continue to be the major concern for the EU, which is today.

Forecasts for future dependence on natural gas imports are based on a mix of different policy scenarios, combining with greenhouse gas (GHG) reduction, increased use of renewable energy.

### **3. Sustainable development of natural gas in Romania**

#### **3.1. Sustainable development strategy on the Romanian energy market**

Sustainable economic growth begins with the traditional concern about the sustainable use of natural resources. Effective use of non-renewable resources such as energy and ore deposits and the sustainable use of renewable resources have been taken into account as part of the sustainable growth agenda for the coming decades. Natural resources are needed for economic activity, providing raw materials and environmental services essential to continued production.

Romania is equipped with different types of natural resources which, if used productively, can support economic growth: resources of fuels and minerals (including oil, gas, lignite, ferrous metals, copper, bauxite, manganese, lead and zinc) Include shale gas; hydro-power resources; wind energy resources and agricultural land. Fuel and ore resources support energy security and are used as industrial inputs. However, oil and gas resources have fallen over time.

The discovery of natural gas deposits in the Romanian Black Sea basin would cover, without the current ones, domestic consumption for a period of 25 years (Economica.net, 2016).

According to Leca A. "The integrated energy strategy consists of a set of interdependent measures that direct the energy sector to the most efficient, equitable and environmentally compatible use of resources".

Currently, the Romanian energy sector is responsible for generating 58 percent of the emissions of pollutants (World Bank, 2013) and is therefore the most important sector for diminishing.

Although per capita emissions are the lowest in the EU, economic growth will lead to higher energy demand, accompanied by higher per capita emissions of pollutants and in general. In fact, the increase in energy demand is already significant. As demand growth will require the construction of new supply capacities, this is an opportunity to "green" the energy sector by increasing the share of less energy intensive sources of emissions in primary energy supply, especially in the energy sector. Although the Romanian energy sector has already lowered the lignite, oil and natural gas share of primary supply and has diversified by focusing on hydropower, nuclear energy and renewable energy (mainly biomass), there is still room for improvement.

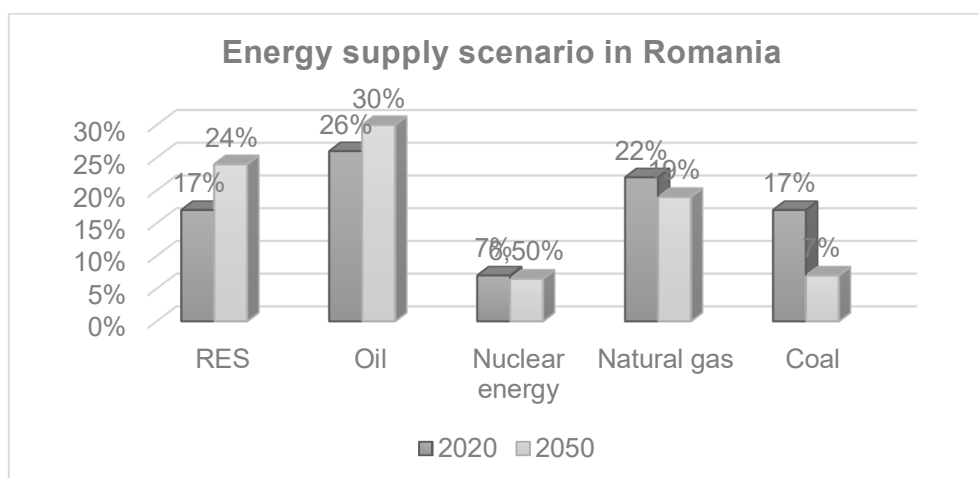
As far as demand is concerned, energy efficiency measures will bring great benefits, especially in industry. With regard to supply, a further increase in production from renewable sources, including hydropower and wind energy (the country has a high hydro potential and the best potential for developing wind power in Southern Europe) to achieve renewable energy sources by 2020 will support the reduction of GHG emissions.

#### **3.2. Scenario on Sustainable Development in the Natural Gas Sector in Romania**

The continuous decarbonisation process of Romania's energy sector raises great challenges and will require the transformation of energy generation methods: 46% of primary energy and 40% of production still rely on coal and oil. As a result, the energy sector is responsible for almost 60% of Romania's total emissions, and GHG emissions reduction targets after EU 2020 cannot be achieved without significant

energy-related measures. In addition, Romania faces significant investment needs irrespective of the reduction obligations to replace power plants supplied with fossil fuels; and switching to renewable energy production to reduce emissions from the energy sector increases costs.

A scenario for modeling energy resources over the period 2020-2050 is represented in Figure 4.



**Figure 4:** Energy supply scenario in Romania in 2050

Results obtained by the author

The primary energy supply structure in Figure 6 reflects a moderate increase in the share of cleaner energy sources. The share of energy from renewable sources (hydro, wind and solar) increases from 17% in 2020 to 24% in 2050. While oil and natural gas continue to be the most important source of primary energy: the share of oil increases slightly from 26% in 2020 to 30% in 2050, while the share of gas drops by 3% from 22% in 2020 to 19% in 2050. Coal use is reduced from 17% in 2020 to 7% in 2050 in the scenario under consideration.

However, with good policies and adequate investment, the Romanian energy sector has the potential to become a driver of sustainable economic growth.

#### 4. In conclusions

The internal gas market, which has been gradually implemented throughout the Community since 1999, has been aimed at offering all consumers in the European Union, real choice, new business opportunities and Intensified cross-border trade to ensure efficiency gains, competitive prices and improved service quality, as well as contributing to security of supply and sustainable development.

Against the backdrop of falling primary energy production and increasing consumption, EU Member States have begun to become increasingly dependent on the supply of imported natural gas, contracts concluded over several decades, where the price was set according to the price Crude oil on a market that had been closed down until then.

The European Commission adopted in November 2010 the Energy 2020 - A Strategy for a Competitive, Sustainable and Secure Energy Strategy, which defines energy

priorities for a 10-year period, and proposes measures that can be taken to address a range of challenges, including creating a competitive and secure supply market, strengthening leadership in technology and effective negotiation with international partners.

The framework for 2030 proposes new objectives and measures aimed at enhancing the competitiveness, safety and sustainability of the European Union's economy and energy system. A greenhouse gas (GHG) reduction of 40% below 1990 levels, a binding target of at least 27% at EU level for renewable energy, renewed ambitions for energy efficiency policies, a new governance system And a set of new indicators to ensure a competitive and secure energy system are the pillars of the new EU climate change and energy framework for 2030.

Although Romania imported a very low quantity of natural gas in 2015, as the price of oil is declining, the price of domestic natural gas is increasing. Considering the current energy context, subject to major fluctuations due to the variability of world energy prices (oil prices), the emergence of niche technologies that make available resources that are once economically unviable, the decision of countries like Japan or Germany to exclude nuclear technology from the state's energy mix, it is necessary to know the potential vulnerabilities of the country and to manage the natural gas market in Romania Based on sustainable development, taking into account geopolitical realities.

As far as natural gas is concerned, I believe that it can be a temporary source of substitution energy for more polluting sources of energy (such as coal), but their main role by 2050 is to be a transition resource to energy sources with low carbon dioxide emissions.

Achieving emission reduction targets beyond the EU 2030 targets will require Romania to abandon plans for a new coal-fired power generation capacity and extend the lifetime of existing plants. It will also require additional significant capacity to generate renewable energy. Replacing power plants based on fossil fuels implies a heavy investment burden regardless of the reduction targets; Switching to renewable energy, oil and natural gas to reduce emissions from the energy sector at the same time will increase costs.

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## INTERNATIONAL E-COMMERCE IN THE EU MEMBER STATES: A GROWING ECONOMIC ACTIVITY

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**Abstract:** *E-commerce has been steady rising as Internet and communication technology spread in the world and in the EU, too. Even it is a quite new communication tool, using it has become more and more common. As generational shift deepens and the newcomers are replacing older ones, there are found new uses for Internet. E-commerce, e-banking and Internet become inextricably linked. Even so, there are differences among companies and countries regarding on-line shopping. As in Europe, the biggest e-commerce players originate in the US, and the biggest e-commerce European market is the UK – with 6.1% – there is a quite different acceptance of this new type of trade: the mature European market is located in the Western Europe, while emerging markets are to be found in its Northern and Eastern parts. The situation is due to different aspects such as cultural and linguistic impediments, different legal procedures and different financial policies, with some countries belonging to EURO zone, while others being outside it, different tax policies some countries having a lower value added tax, while other bigger. Even there is stated that the EU intends to cut impediments to international movement of people, goods, and money, there is still a great difference among the EU member states, national borders become in lot of cases technical barriers, harming international movements of goods. Furthermore, there is a technical-legal issue which is connected to international settlements of disputes springing from e-commerce activities, and which authority should be enforced to solve a dispute between a client and a business/seller. There was created a European Consumers Center Network which provides the needed platform for respecting consumers' rights, but in some cases consumers' complaints found no solution, especially due to disagreements between the trader and its consumer. Another issue mentioned in the paper is connected to Internet restrictions made by different EU member states, targeting foreign on-line sellers, harming in this way the international trade. Anyway, with growing and more and more people becoming accustomed to e-commerce, the future of this new type of trade will steady grow, but not to the level of totally marginalizing the old style physical trade. Nowadays, almost 57% of European internet users are buying online, but only 16% are shopping from another EU Member State; in the case of European SMEs, only 16% are selling online, with only half of them selling across borders (E-commerce Europe, 2016a:12). It's not all about selling and buying: internet security, consumer policies, e-logistics, e-payments, taxation and competition must be taken into account.*

**Keywords:** *cross border; e-commerce; EU; Member States.*

**JEL Classification:** *L81.*



## 1. Introduction

In Europe, in 2015, 75% of people, that is 516 million inhabitants, were using the internet, out of which 296 million inhabitants (43%) were e-shoppers. Europe's total Gross Domestic Product is estimated to have reached €17.6 trillion in 2015, that of EU28 amounted to €14.6 trillion; the share of the e-commerce in Europe's GDP was 2.59% in 2015, which is forecasted to double by 2020 (E-commerce Europe, 2016a). The share of e-commerce in Asia Pacific GDP in 2015 was 4.48%, for North America was 3.12%, for Latin America was 0.77% and for Middle East and North Africa was 0.71% (E-commerce Europe, 2016b).

With regards to the global economy, cross border e-commerce is seen as a development branch for both business providers and consumers, such as „postal, parcel, express and logistics companies, and merchants, payment gateways and associated technology providers” (Daniels, 2012). If in the past, expanding internationally online had been rather a difficult option, today retailers are making it a reality, but sometimes they forget to make a careful analysis of the suitable markets they want to settle in through e-commerce.

As for the European Union market, the steady rise of the e-commerce sector is proven by the fact that the European B2C turnover has risen by 12%-13% each year: in 2014 €402 billion, in 2015 €455 billion, in 2016 €510 billion (forecast) (E-commerce Europe, 2016a). Even if the numbers look a bit optimistic on paper, in practice there is still considerable work to be done when it comes to consumption policies and consumer protection beyond national borders.

The global B2C e-commerce turnover was €1895 billion in 2014, €2273 billion in 2015 and €2671 billion in 2016 (forecast) (E-commerce Europe, 2016b). In 2015, the regional figures were as follows: Asia Pacific €1057 billion, North America €644 billion, Europe €505 billion, Latin America €33 billion, Middle East and North Africa €26 billion, others €8 billion (E-commerce Europe, 2016b).

Despite the fact that European B2C e-commerce market is greater than the US B2C e-commerce market, there is an obvious paradox worth to be mentioned: the biggest Europe e-commerce players are from the US and, as a matter of fact, only 20% of European e-retailers are selling to another European Union country.

In 2014, online sales turnover in Europe were registered by: Amazon (US) €24.23 billion, Otto (Germany) €6.45 billion, Apple (US) €3.75 billion, Tesco (UK) €3.53 billion, Home Retail Group (UK) €2.32 billion, Cidscout (France) €2.23 billion, Zalando (Germany) €2.21 billion, E Leclerc (France) €1.90 billion, Shop Direct (UK) €1.87 billion, Next Plc (UK) €1.86 billion, Carrefour (France) €1.80 billion, Vente Prive (France) €1.70 billion, Asda (UK) €1.70 billion, Metro Group (Germany) €1.50 billion, John Lewis (UK) €1.46 billion (E-commerce Europe, 2016a).

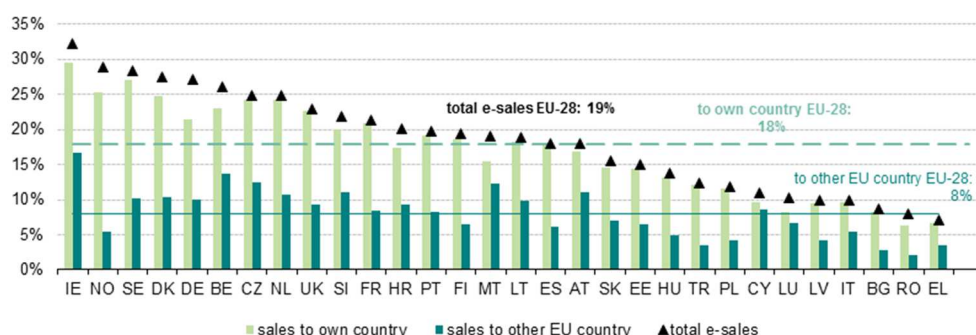


**Figure 1:** Overview and forecast of European B2C e-commerce turnover

## 2.E-commerce development within European borders

European Union's overall e-commerce market is fragmented by major differences from country to country, in terms of cultural perceptions, legal regulations and technical issues. Basically, it could be categorized as follows: mature markets are found in Western Europe (€252.9 billion B2C e-commerce turnover in 2015), Central Europe (€89.5 billion B2C e-commerce turnover in 2015) and Southern Europe (€50.9 billion B2C e-commerce turnover in 2015); emerging markets are found in Northern Europe (€37.6 billion B2C e-commerce turnover in 2015) and Eastern Europe with its €24.5 billion B2C e-commerce turnover in 2015 (E-commerce Europe, 2016a). The main factor for the establishment of these fragmented markets in Europe, compared with the unitary market in the US, is represented by the borders within Europe, despite of the EU principle of free mobility of citizens, goods, assets and services between Member States.

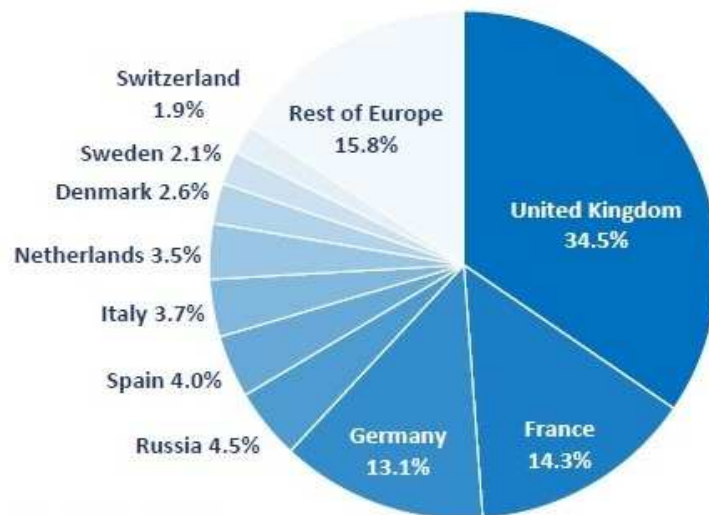
Figure 2 shows individual situations of Member States e-commerce sales to their domestic market, respectively to another EU country, in 2014. As it can be seen below, only 18% of the EU retailers are selling over the internet and only half of them are actually selling across borders, within 10 or more EU Member States.



**Figure 2:** E-commerce sales to own country and other EU Member States in 2014

Source: [http://ec.europa.eu/eurostat/statistics-explained/images/4/40/V1E-commerce\\_sales\\_to\\_own\\_country\\_and\\_other\\_EU\\_countries%2C\\_2014\\_%28%25\\_enterprises%29.png](http://ec.europa.eu/eurostat/statistics-explained/images/4/40/V1E-commerce_sales_to_own_country_and_other_EU_countries%2C_2014_%28%25_enterprises%29.png)

In terms of the share of e-commerce in GDP in 2015, the UK dominates the European market, with a share of 6.1%, being followed by Denmark (4.4%), Finland (3.5%), France (3%), Ireland (2.8%), Czech Rep. (2.6%), Netherlands (2.4%), Austria and Sweden (2.2%) (E-commerce Europe, 2016a). According to Figure 3, UK, France and Germany had the biggest share of European B2C e-commerce market in 2015.



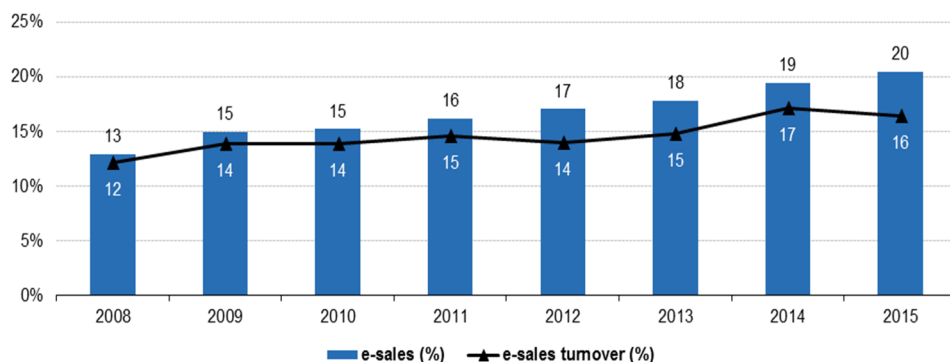
**Figure 3:** Share of European B2C e-commerce market, 2015

Source: E-commerce Europe (2016), *European B2C E-commerce report 2016*

**Table 1:** Percentage of cross-border B2C purchases in the EU 2013 - 2015

Country	2013	2014	2015	Country	2013	2014	2015
Austria	39%	40%	44%	Italy	7%	9%	11%
Belgium	28%	34%	35%	Latvia	15%	16%	19%
Bulgaria	6%	7%	7%	Lithuania	10%	11%	11%
Croatia	7%	8%	10%	Luxembourg	64%	65%	68%
Cyprus	21%	24%	20%	Malta	39%	39%	44%
Czech R.	7%	7%	9%	Netherland	15%	21%	21%
Denmark	32%	36%	35%	Poland	3%	4%	4%
Estonia	13%	22%	26%	Portugal	11%	12%	16%
Finland	32%	36%	38%	Romania	1%	1%	2%
France	18%	21%	21%	Slovakia	17%	20%	20%
Germany	11%	12%	13%	Slovenia	15%	17%	17%
Greece	9%	10%	10%	Spain	12%	15%	18%
Hungary	6%	8%	11%	Sweden	23%	22%	25%
Ireland	24%	28%	30%	UK	14%	18%	20%

Source: E-commerce Europe (2016), *European B2C E-commerce report 2016*

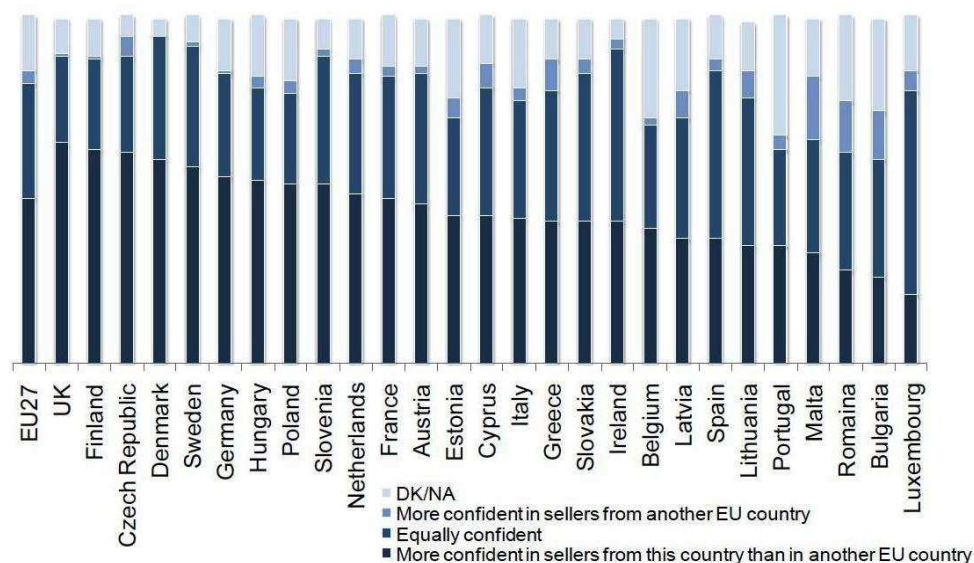


**Figure 4:** E-sales and turnover from e-sales, 2008 to 2015, EU28 (%enterprises, %total turnover)

Source: [http://ec.europa.eu/eurostat/statistics-explained/images/e/e9/E-sales\\_and\\_turnover\\_from\\_e-sales%2C\\_2008\\_to\\_2015%2C\\_EU28\\_%28%25\\_enterprises%2C\\_%25\\_total\\_turnover%29\\_fig1.png](http://ec.europa.eu/eurostat/statistics-explained/images/e/e9/E-sales_and_turnover_from_e-sales%2C_2008_to_2015%2C_EU28_%28%25_enterprises%2C_%25_total_turnover%29_fig1.png)

### 3.The borders as cultural impediments in EU e-commerce

Although it can be overall stated that e-commerce is beginning to cross border of multiple European countries, few companies are engaged in selling their products online to consumers in other countries, even though demand for cross-border service exists, with „one third of all EU citizens indicating they would consider buying a product from another member state via the Internet because it's cheaper or better or not available in their home country” (Friedriksson, 2012).



**Figure 5:** Levels of confidence when purchasing good or services via internet

Source: European Commission (2015), *Flash Eurobarometer 397: Consumer attitudes towards cross-border trade and consumer protection*.

The border impediments in cross border cultural approach arise especially when it comes to advertising differences in culture and language often requiring completely different marketing campaigns or approaches, not only for print or TV advertising, but also for pay per click (PPC) and online display advertising.

Country relevant indicators regarding advertising / marketing industry have to be taken in account when creating and undertaking online or offline marketing campaigns, so, in order to have cross-border sales it is necessary to maintain website(s) in multiple languages, invest in country and/or language specific search engine optimization (SEO) and run multiple marketing campaigns which are also different for each country or language.

These requirements have a great influence on reducing the impact of cultural differences in cross border e-commerce, proved by the fact that almost half of all Europeans have come across advertisings coming from sellers located in other EU countries, and almost a third of them have also made a cross-border purchase.

#### **4.The borders as legal impediments in EU e-commerce**

It is a known fact that internet is the key platform for e-commerce, thereby it is a driver for national or international trade. Despite its growing significance, governments are restricting the Internet, for preventing cybercrime or access to morally offensive content. In other cases, internet restrictions are targeting foreign businesses and the sale of goods and services online, such internet restrictions being discriminatory and harming to international trade (Meltzer, 2013:1).

The regulatory obstacles in cross border e-commerce do not specifically relate to the digital nature of e-commerce, they represent national regulations that affect all retailers, both traditional shops and online shops. The costs of complying with national laws on transactions with consumers, along with different laws on labelling and packaging (Malhere, 2012) tend to discourage e-retailers.

In terms of general e-commerce legislation, stakeholders are reporting issues when it comes to the application of the liability of intermediary service providers (Wubben et al, 2012:3), with unclear attributes of institutions in charge of solving them.

Concerning the area of contract law and consumer protection, national law still predominantly governs contract law. Despite the adoption of the Consumer Rights Directive in 2011 (Wubben et al, 2012:3), when it comes to online dispute resolution, currently there is missing an out-of-court settlement of disputes procedures (Wubben et al, 2012:3), due to the fact that legislation governing contracts and civil procedures still vary across Europe.

Regarding the personal data protection, divergences in applying Data Protection Directive by the EU Member States have generated costs and administrative burdens for data controllers (Wubben et al, 2012:4). In the EU, data protection laws prevent the export of data to countries with lower data privacy laws, which restrict their ability to provide services exports such as accounting or advertising require the collection of personal data from EU customers (Meltzer, 2013:6).

Electronic signatures in cross-border e-commerce also represent a doubtful instrument, due to the limited legal framework, liability, interoperability, complexity and costs associated with them (Meltzer, 2013:6), despite of the fact that each Member State has a national service which is in charge of monitoring e-payments. Value-added tax is still a member-state issue, first of all, because of the substantial differences in VAT rates applied to typical e-commerce products in different EU Member States, which determines private consumers to buy products from the

country with the lowest VAT rate; second of all, „physical variants of products are in a number of cases taxed at lower rates than the digital variants within EU Member States”; thirdly, „the VAT treatment that can apply to certain suppliers can provide the supplier with an advantage in the distribution or facilitation of the e-commerce trade” (Schmidt et al, 2012: 8).

There are some solutions for these issues: first of all, for several years, „suppliers of distance selling products have had to apply the VAT of the destination country when selling goods to other countries, if their sales exceeded certain thresholds”; second, „for digital content services provided by EU based business to customers resident in the EU, it was decided in 2008 to go from the country of origin to the country of destination VAT, as of 2015 (such rule has already been applied to non-EU based businesses operating in the EU since 2003)” (Schmidt et al, 2012: 8).

### 5.The borders as technical impediments in EU e-commerce

Fortunately, concerning the technical aspects in cross border e-commerce, the European Consumers Centre Network, with headquarters in each Member State, takes the full task to ensure that consumers' rights are respected in online trade. Almost a third of the annual recorded complaints are related to the transportation sector, of which the majority of complaints are linked to air transport, including problems with luggage – whereas only a lower proportion concerns leisure activities, or restaurants, hotels and accommodation services.

**Table 2:** Sectors of cross border complaints in EU e-commerce

Main economic sectors concerned by complaints	Percentage
Transport, out of which:	32.1%
Air transport (including problems with luggage)	21.6%
Car rental	3.4%
Timeshare related products and package holidays	7.4%
Recreational, sporting and cultural services	7.0%
Furnishing, household equipment, routine household maintenance	6.8%
Audio-visual, photographic and information processing equipment	5.6%
Health	5.1%
Communication	4.7%
Clothing and footwear	4.5%
Hotels and restaurants	4.5%
Personal care goods and services	3.0%
Financial services and insurance	2.5%

Source: European Consumers Centres' Network (2013), *Annual Report 2012*

Almost a quarter of the annual complaints received concern infringements on distance contracts. Other refer to denied boarding, cancellation or long delay of flights or to sales of consumer goods and associated guarantees. Most common complaints arise from product non-delivery, malfunction or noncompliance, contract rescissions or supplementary charges (ECC Network, 2013:13).

In almost half of these complaints, an amicable settlement is reached with the trader; in other cases, the complaints are redirected to mediators, consumer protection bodies or courts (ECC Network, 2013:13). There are cases where no solutions are found, due to refusal of mutual agreements by traders or consumers.

## 6. Conclusions

The common market of the European Union has some weak points, in terms of consumer friendliness and protection, cross border e-commerce standing up for this fact: it can offer considerable business opportunities, but only a reduced proportion of European consumers effectively shop online across borders, because of the lack of confidence in retailers.

E-commerce was defined by Eurostat as „purchases and sales made via websites or via automated data exchange, which can involve 3 typical situations: from consumers to consumers (C2C), from businesses to consumers (B2C) and from businesses to other businesses (B2B)” (Meschi, 2011). This article focused mostly on the B2C e-commerce, but there are much more issues to be solved, particularly in the C2C sector, taking in consideration that the B2B sector is much more directed by commercial contracts between firms. For all 3 sectors, issues including specific cultural features that affect marketing, some local legal peculiarities and the need to set up appropriate payment and anti-fraud systems are becoming more and more preeminent and impose solutions which have to be implemented.

It is not just a matter of adaption of retailers or consumers; Member States must focus outside their national borders, in terms of facilitating e-commerce, without fearing that online shopping could completely push to the margins or even replace physical stores. Although specific market conditions exist, and taking into consideration the fluctuations of the single Euro currency which has not been implemented in all Member States yet, and the fact that some Member States are lagging behind in online bandwidth and adding the difficulties of obtaining financing for small and medium enterprises, it is quite sure that over the next decade, cross border e-commerce will look very different in comparison with what we had been used to encounter.

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## LES TERMES ÉCONOMIQUES ET JURIDIQUES – UN DÉFI POUR LE TRADUCTEUR

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**Abstract:** *In this paper we undertake to examine a series of problems related to the specialized lexicon, arisen from the translation from Italian into Romanian of documents produced in and for an organisation. We shall particularly refer to the contractual clauses related to payment and payment methods, to invoices or to bids. Terms such as acconto and caparra raise problems for the translator; both terms present the dictionary translations accont, arvună though the words are not perfect synonyms. Also, the meanings of the terms acconto and anticipo do not overlap. We will present several contexts in which the terms accont, arvună, avans cannot be used one instead of another, despite the fact that many dictionaries list them as equivalent. In order to translate such documents correctly, the translator needs not only experience, dictionaries and extremely rich and accurate glossaries, but also legal and economic knowledge or the assistance of a lawyer or a legal adviser. The consequences of translation errors may range from misunderstandings between contractual parties, non-fulfilment of contractual obligations, impossibility of using the document, its invalidation, to even disruptions in the activity of that organisation. The primary objective of the translator is to deliver a quality translation that has the form, meaning, cohesiveness and qualities of the original document.*

**Keywords:** *translation studies; terminology; special purpose language; synonyms; equivalence.*

**JEL Classification:** Z19.

### 1. Introduction

Ces dernières années, en Roumanie l'offre en matière de traduction économique et financière a beaucoup augmenté. Les banques et les grandes entreprises italiennes, qui 30 années auparavant avaient ouvert des filiales sur le territoire roumain, continuent à produire un très grand nombre de documents qui servent au déroulement de leurs relations commerciales. La plupart de ces documents, élaborés par des spécialistes en économie, par des experts-comptables, par des commissaires aux comptes ou par des avocats des espaces culturels italien et roumain, doivent être traduits pour être ensuite utilisés dans deux contextes culturels et linguistiques différents.

Il s'agit de *textes dans lesquels „le jargon juridique cohabite avec le langage économique et financier”* (Román, 2012), qui contiennent des termes spécialisés et, parfois, même des concepts propres à chaque système fiscal ou à chaque culture juridique. Vu les difficultés terminologiques et syntaxiques de ces textes et les délais extrêmement brefs et stricts imposés par les agences de traduction ou par les clients, les traducteurs risquent de livrer une traduction de qualité médiocre.

«S'il est impossible pour le traducteur de dominer tous les thèmes susceptibles de figurer dans les textes, il devra néanmoins effectuer des

recherches documentaires approfondies pour acquérir les connaissances techniques de base et comprendre les différents termes et expressions qu'il risque de trouver dans le texte source, s'il veut être en mesure de faire les meilleurs choix terminologiques.» (Román, 2012)

### **1.1 Difficultés et stratégies de traduction**

La plupart des études consacrées à la traduction des documents économiques, financiers et juridiques concernent la traduction de l'anglais vers le français, l'espagnol ou l'allemand. Il y a peu d'études dans l'espace culturel italien et encore moins d'études dans l'espace roumain. En outre, la préoccupation centrale des chercheurs est de signaler l'impact des différences culturelles et de trouver des stratégies de traduction pour les notions non partagées.

En ce qui concerne la traduction juridique de l'anglais vers le français, Harvey (2009) explique que les spécificités des deux cultures juridiques proviennent du fait que le droit français et le droit anglais appartiennent à deux familles différentes, à savoir la famille romano-germanique et la famille du *common law*. C'est pourquoi l'organisation de la justice (distinction droit public/droit privé versus droit civil/droit pénal), les démarches adoptées (démarche déductive versus démarche inductive) et la procédure pénale (procédure inquisitoire versus procédure accusatoire) sont différentes. Il en résulte de nombreux termes spécifiques représentant des institutions, des professions ou des concepts.

Harvey propose quatre stratégies de traduction, applicables également à d'autres combinaisons de langues: l'équivalence culturelle – orientée vers la culture cible – un terme spécifique à la culture source est rendu par un terme spécifique à la culture cible (*conseil des prud'hommes* – *employment tribunal*), l'équivalence formelle ou linguistique – orientée vers la culture source – une traduction mot à mot (*notaire* – *notary*), la traduction descriptive – une explication concise (*délit* – *major offence*) et la transcription – une reproduction du terme, avec l'ajout d'une glose (*the Tribunal de Police* – *local criminal court*). En fonction de la technique de traduction choisie, le traducteur a un rôle plus ou moins actif dans le processus de la communication. En ce qui concerne les systèmes juridiques italien et roumain, ils appartiennent à la même famille, à savoir la famille romano-germanique. Les principes généraux du droit sont les mêmes (étant basés sur le Code Napoléon), mais au cours des années et en vertu d'une évolution historique très différente, les deux systèmes juridiques ont subi des réformes et ont introduit des innovations, c'est pourquoi le traducteur peut se trouver dans la situation de devoir fournir des équivalents pour des concepts spécifiques à un des systèmes juridiques ou pour des concepts dont les sens sont plus ou moins larges.

Par exemple, le règlement 2015/848/UE relatif aux procédures d'insolvabilité autorise, outre une procédure d'insolvabilité principale de portée universelle, des procédures nationales. Les étapes de la procédure, le nombre et les fonctions des personnes impliquées diffèrent d'un pays à l'autre:

**Tableau 1:** Les procédures d'insolvabilité en Italie et en Roumanie

Italie	Roumanie
<i>Fallimento</i> <i>Concordato preventivo</i> <i>Liquidazione coatta amministrativa</i> <i>Amministrazione straordinaria</i> <i>Accordi di ristrutturazione</i> <i>Procedure di composizione della crisi da sovraindebitamento del consumatore (accordo o piano)</i> <i>Liquidazione dei beni</i>	<i>Procedura insolvenței</i> <i>Reorganizarea judiciară</i> <i>Procedura falimentului</i> <i>Concordatul preventiv</i>

**Tableau 2:** Les praticiens de l'insolvabilité

Italie	Roumanie
<i>Curatore</i> <i>Commissario giudiziale</i> <i>Commissario straordinario</i> <i>Commissario liquidatore</i> <i>Liquidatore giudiziale</i> <i>Professionista nominato dal Tribunale</i> <i>Organismo di composizione della crisi nella procedura di composizione della crisi da sovraindebitamento del consumatore</i> <i>Liquidatore</i>	<i>Practician în insolvență</i> <i>Administrator concordatar</i> <i>Administrator judiciar</i> <i>Lichidator judiciar</i>

### 1.2 Caractéristiques des langages spécialisés

Parmi les recherches de traductologie réalisées dans l'espace italien, nous considérons qu'il est important de mentionner l'étude portant sur la traduction des textes économiques et financiers dans la presse écrite espagnole et italienne, réalisée par Scelfo (2009). En inventoriant les caractéristiques générales des langages spécialisés, selon les études de Gotti e Scarpa, à savoir „precisione, oggettività, economia, chiarezza, appropriatezza” (précision, objectivité, économie, clarté, pertinence), Scelfo (2009: 18) affirme que le langage économique et le langage juridique s'écartent dans une certaine mesure de ces qualités requises, que le langage économique n'est pas tout à fait objectif et que le langage juridique n'est pas toujours très clair.

En ce qui concerne les caractéristiques lexicales des langages spécialisés, Scelfo (2009: 18-23) retient la monoréférentialité (dans un certain contexte il existe une seule signification attribuable à un certain terme), la non-émotivité (en général, le ton est neutre, à l'exception du langage économique – surtout de la presse – où l'on remarque l'utilisation des figures rhétoriques), le principe de l'économie (l'utilisation des symboles et des sigles), la transparence, la concision, le traditionalisme (le langage juridique italien utilise souvent des archaïsmes), l'ambiguïté (il y a des cas de polysémie), la synonymie (les éponymes du langage médical: *l'ipernefroma* ou *il tumore di Grawitz*), l'imprécision (les locutions *carta di soggiorno* e *permesso di*

*soggiorno* donnent à l'étranger le statut de résident temporaire ou permanent sur le territoire italien), la redondance (dans les sentences).

Scelfo démontre que le langage économique de la presse s'écarte de la norme, car les titres et les articles contiennent beaucoup de figures rhétoriques (surtout des métaphores). Les textes de presse ont un degré plus élevé de subjectivité que les autres textes spécialisés, ce qui génère des difficultés quand il s'agit de la traduction.

### **1.3 La langue économique et financière**

La presse écrite et la télévision créent de nombreux néologismes, misent sur les jeux de mots et forgent des métaphores, difficilement transposables dans une autre langue. Dans ce cas, le traducteur devra beaucoup intervenir dans le texte, étant un „participant actif dans la communication” (Harvey, 2009) et même un créateur, un inventeur, un artiste. D'ailleurs, la plupart des études portant sur le langage économique sont réalisées sur des corpus de presse.

D'autre part, il n'est pas facile non plus de traduire des accords, des contrats, des rapports annuels d'entreprises et d'institutions financières, même si ce sont des documents qui privilégient un mode d'expression plus neutre et plus académique. D'autres caractéristiques de ces textes sont la monoréférentialité, la densité d'information, la cohérence logique, l'abondance de termes spécialisés.

La complexité lexicale et le haut niveau de technicité de ces textes requièrent de la part du traducteur des compétences non seulement linguistiques ou communicationnelles, mais aussi des connaissances solides dans les domaines économique et juridique.

En outre, il ne faut pas oublier que la syntaxe de l'italien est difficile. Les phrases sont longues, ayant une cadence et un rythme particuliers. Les Italiens ont un goût hédoniste pour les boursouflures du style, pour „l'ampollosità” et „l'anfrattuosità” des périodes (Scavée et Intravaia, 1979). Les accords, les contrats et les rapports sont écrits par des avocats et des experts, dans un style soutenu, caractérisé par la recherche du terme le plus noble, le plus rare, par l'usage d'archaïsmes et de latinismes. Tout cela pose au traducteur des problèmes supplémentaires.

Généralement, l'intervention du traducteur dans le texte ne devrait pas être visible. De plus, toute erreur de traduction a des conséquences, parfois très graves, pouvant causer des retards ou bien faire échouer les transactions.

## **2. Termes désignant les paiements partiels**

Nous allons présenter les difficultés qui surgissent lors de la traduction de termes qui, apparemment, ne devraient pas poser de problème. Il s'agit de quelques termes désignant des paiements partiels de sommes d'argent. Ce sont des mots hérités du latin, dont la signification est très proche, mais qui ne sont pas des synonymes parfaits bien qu'ils soient signalés comme tels dans les dictionnaires: *acconto*, *anticipazione*, *anticipo*, *caparra*.

Aussi bien les particuliers que les entreprises sont amenés parfois à signer des accords, des avant-contrats ou des contrats d'achat-vente, à payer des factures ou à encaisser des règlements, à effectuer le paiement des impôts etc. Le plus souvent, les prix ne sont pas payés intégralement à une date unique. On paie d'abord une partie de la somme, généralement pour confirmer la volonté d'effectuer l'achat d'un bien ou d'un service. On parle ainsi du paiement d'un acompte, d'une avance ou d'arrhes. Il est important de connaître les différences existant entre les

acceptions de ces termes car, en cas de non-respect des clauses contractuelles, les conséquences sont très diverses: la somme d'argent représentant le premier paiement effectué peut être retenue ou pas par les parties contractantes ; si une des deux parties contractantes se désiste, l'autre pourrait être obligée de signer l'acte définitif ; dans certains cas, les parties peuvent même demander des dommages-intérêts.

Nous allons énumérer d'abord les divers équivalents des termes *acconto*, *anticipazione*, *anticipo*, *caparra* dans les dictionnaires bilingues (italien-roumain), ensuite nous allons présenter les différences signalées par les dictionnaires juridiques et par les articles postés sur les sites des spécialistes et des professionnels du droit. Nous allons illustrer les fonctions de ces termes en contexte (en présentant des extraits de documents authentiques) et les situations où ils apparaissent avec prédilection.

### 2.1 *Acconto* (< locution *a conto*)

Ce terme se réfère principalement à un paiement partiel à valoir sur une somme due (fr.: acompte ; r.: *acont*). Lors d'une transaction ou d'un contrat de vente, il s'agit d'une somme d'argent avancée au vendeur, ayant le rôle de montrer le sérieux de l'engagement. Cette somme sera déduite du prix de vente final. Une des conséquences juridiques du paiement d'un acompte est le fait que la vente est considérée réalisée de manière définitive. Les parties n'ont pas la possibilité de renoncer à la transaction effectuée.

Le terme est traduit dans la plupart des dictionnaires bilingues (italien-roumain) par *acont* (mot emprunté à l'italien) ou *arvună*:

(1) «*arvună, acont*» (D.I.R. - *Dictionnaire italien-roumain*, 1999: p. 18)

(2) «*acont, arvună*» (D.G.I.R. - *Dictionnaire grammatical italien-roumain*, 2000: 7)

Selon le dictionnaire monolingue DEX, le mot roumain *acont* indique un paiement partiel anticipé ou effectué au moment de la conclusion d'un contrat, ayant le rôle de garantie. Le roumain a donc gardé la forme, le contenu et la fonction du terme italien:

(3) «*acont* - parte dintr-o sumă de bani plătită sau încasată înainte, la o cumpărare sau la încheierea unei tranzacții, ca garanție; avans, acontare, arvună» (DEX)

Le même dictionnaire propose comme synonymes les mots *avans* („*sumă de bani plătită anticipat în contul unor servicii, al unor lucrări*”), *acontare* („*acțiunea de a aconta și rezultatul ei ; acont*”), *arvună* („*acont - plătit mai ales la o vânzare sau la o închiriere*”).

Nous devons signaler que dans la pratique, les termes *acont* (*acontare*) et *arvună* ne sont pas superposables. Leurs conséquences juridiques sont différentes. En cas d'inexécution du contrat, l'acompte (*acontul*) doit être restitué à l'acheteur. Il ne confère aucun droit spécial ni à la personne qui l'a payé, ni à celle qui l'a reçu. Il n'existe aucune pénalité pour aucune des parties contractantes. En revanche, si la somme d'argent a été avancée à titre d'arrhes (*arvună*), au cas où l'acheteur se dédit du contrat, les arrhes sont retenues par le vendeur et, si le vendeur renonce au contrat, il doit restituer à l'acheteur le double de la somme reçue. Même lorsqu'une partie a subi des préjudices à cause de la non conclusion du contrat, elle doit restituer l'acompte ; ce n'est qu'ensuite qu'elle peut poursuivre la contrepartie en dommages-intérêts et démontrer qu'elle a subi un dommage ou une perte.

La juridiction italienne prévoit en cas de doute (somme versée à titre d'acompte ou d'arrhes) que le virement doit être considéré comme un acompte (*Cassazione civile sez. III 22.08.1977 n. 3833*) (Giavazzi, 2015). En Roumanie, la situation juridique de la première somme versée comme paiement partiel est similaire: si les parties ne précisent pas à quel titre est réalisé le versement, celui-ci sera qualifié d'acompte. En revanche, la juridiction française est favorable à l'acheteur, en considérant le premier versement comme des arrhes.

Le DJRI (*Dictionnaire juridique italien-roumain*) ne donne que la signification *aconto*, mais il fournit la traduction de deux expressions contenant le mot *acconto*:

(4) «~ *di imposta*, aconto de impozit;

*acconto dividendo*, aconturi de dividende» (DJRI, 2008: 3)

*Acconto d'imposta* représente un paiement anticipé d'une partie des impôts pour l'année en cours, par conséquent on pourrait parler de «plată în avans» sau de «plată anticipată a impozitului»:

(5) «*acconto d'imposta*» – versamento anticipato di una parte delle imposte dovute all'amministrazione finanziaria per il periodo in corso (EE - *Enciclopedia dell'Economia*, 2011: 4)

En ce qui concerne l'expression «*acconto sul dividendo*», il s'agit plutôt de dividendes intérimaires (it.: *dividendi interinali*, r.: *dividende interimare*). Au lieu de distribuer les dividendes aux actionnaires en une seule fois, les sociétés peuvent verser d'abord un acompte:

(6) «*acconto sul dividendo*» – utile versato ai soci come anticipo sul dividendo non ancora deliberato dall'assemblea (EE, 2011: 4)

Dans l'expression «*ritenuta d'acconto*» il s'agit de la retenue à la source. (r. *reține la sursă*).

Alors qu'en général le mot *acconto* peut être traduit par le procédé de l'équivalence formelle, pour transposer en roumain les expressions ci-dessus il vaudrait mieux recourir à l'équivalence culturelle.

Dans la pratique, les documents où *acconto* est utilisé le plus fréquemment et où il représente un paiement partiel d'une somme d'argent sont les factures, les contrats et les conditions générales de vente. Les correspondants roumains seraient *acont* (terme spécifique) ou bien *avans* (terme plus général):

(7) „30%+IVA acconto all'ordine, 70%+IVA ad avviso di merce pronta, prima della spedizione” (30%+TVA acont/avans în momentul efectuării comenzii, 70%+TVA la înștiințarea referitoare la marfa pregătită, înainte de expediere)

En bref, en ce qui concerne le terme *acompte*, nous retenons les traits suivants:

- une partie du prix final, acquittée à l'avance ;
- aucun droit spécial pour les parties ;
- aucune possibilité de dédit pour les parties ;
- aucune pénalité applicable ;
- rôles: confirmer la conclusion d'un contrat, engager les parties de manière ferme et définitive.

## 2.2 *Anticipazione*

Tout comme dans le cas décrit ci-dessus, ce terme se réfère à un paiement par anticipation, le plus souvent partiel, d'une somme d'argent ou d'un salaire, étant une variante du terme *anticipo* (fr. avance ; r. avans):

(8) „anticipație, anticipare; ~ *del prezzo d'appalto*, anticiparea prețului de antrepriză;” (DJRI, 2008: 11)

(9) „anticipare, anticipație” (D.G.I.R., 2000: 33)

Dans la plupart des dictionnaires et des documents d'entreprise on trouve les collocations „*concedere/ottenere un'anticipazione sul salario*” (*a acorda/a obține un avans din salariu*).

Les dictionnaires signalent également l'expression *anticipazione bancaria*, qui se réfère à un prêt garanti par un gage, à savoir un crédit lombard (r. credit lombard):

(10) „*contratto di anticipazione*, contratto per cui una banca somministra o si obbliga a tenere a disposizione del cliente una somma di denaro in base al valore attribuito a merci o a titoli depositati in garanzia: *anticipazione su merci, anticipazione su titoli*;” (Treccani, T.)

Dans les exemples suivants, le premier dictionnaire bilingue italien-roumain fait appel à la traduction descriptive, le second à l'équivalence formelle:

(11) „(bancar) împrumut acordat pe baza garanției în titluri sau mărfuri” (D.I.R., 1999: 57)

(12) „~ *bancaria*, anticipare bancară” (DJRI, 2008: 11)

Dans un extrait d'une procuration spéciale, parmi les opérations bancaires que le mandataire peut effectuer pour le compte du mandant il y a les demandes d'avances ou de prêts:

(13) „affinché [...] possa effettuare operazioni bancarie di qualsiasi tipo [...], chiedere *anticipazioni* e finanziamenti di ogni tipo [...]” (pentru ca să poată efectua operațiuni bancare de orice fel, [...] să ceară avansuri și credite de orice fel [...])

On parle toujours d'équivalence formelle pour l'expression *anticipazione in conto corrente* (fr.: avance en compte courant ; r.: *avans în cont curent*). En roumain il y a également *provizion pentru descoperit de cont*:

(14) „*anticipazione in conto corrente*, quando l'anticipato può alternare prelevamenti e versamenti entro i limiti del fido concessogli;” (T.)

L'équivalent roumain de l'expression *anticipazione di cassa* serait *avans de trezorerie* (fr.: avance de trésorerie):

(15) „*anticipazione di cassa*, anticipazione fatta da una banca al cliente in vista di un suo prossimo incasso certo e definito, la cui esazione viene affidata alla banca a garanzia del rimborso dell'anticipazione stessa.” (T.)

Pour le terme italien *anticipazione* nous retenons l'acception principale de paiement par anticipation, le plus souvent partiel:

- d'une somme d'argent ;
- d'un salaire.

### 2.3 Anticipo

Le sens général de ce terme est le même que le sens du mot *anticipazione*, à savoir un paiement partiel d'une somme d'argent (fr. avance, acompte, à-valoir ; r.: *avans*). Dans le sens concret, le terme désigne 1. une partie d'une somme d'argent reçue avant le délai établi ou la date limite: „*chiedere un anticipo sullo stipendio*” (demander une avance sur le salaire) équivaut à *a cere un avans din salar ; concedere un anticipo* (accorder une avance) *a acorda un avans* ; 2. une somme versée comme acompte pour l'achat de biens ou services („*avans* - sumă de bani plătită anticipat în contul unor servicii, al unor lucrări - DEX”).

(16) „1. anticipare, anticipație; 2. avans; 3. (banca) împrumut acordat pe baza unor încasări viitoare” (D.I.R., 1999: 57)

(17) „avans; *ho versato un ~ di 100 dollari*, am dat un avans de 100 de dolari” (D.G.I.R., 2000: 33)

Dans les contrats ou dans les conditions générales de vente, il a la même signification que le mot *acconto* (*accont*), à savoir un premier paiement effectué au moment où le contrat est définitivement conclu:

(18) „30% in contanti quali *anticipo* all'ordine, 70% da concordare” (30% în numerar ca avans în momentul comenzii, 70% de stabilit de comun acord)

Le correspondant roumain du mot italien *anticipo* est *avans*. Il représente toujours:

- le paiement partiel d'une somme d'argent avant la date limite (synonyme: *accont*) ;
- le paiement en avance d'une partie du salaire.

## 2.4 Caparra

Tout comme dans le cas du mot *acconto* (acompte), le mot *caparra* (arrhes) est traduit dans la plupart des dictionnaires bilingues italiens-roumains par *arvună*, *accont* (D.I.T., DJRI, D.G.I.R.). En réalité, le correspondant le plus approprié serait *arvună*: „*dare una caparra*” (fr.: *donner des arrhes* ; r.: *a da o arvună*).

Le terme apparaît généralement dans les avant-contrats ou promesses de vente. Les parties ont la possibilité de conclure ou non l'acte définitif.

Dans les systèmes juridiques italien et roumain, les termes *caparra* et *arvună* ont les rôles suivants:

- confirmer la conclusion d'un contrat – dans ce cas les arrhes représentent une partie du prix ;
- permettre à la partie qui a donné les arrhes de se dédire – auquel cas elles seront retenues par le promettant vendeur ;
- pénaliser une des parties.

Țița-Nicolescu (2016) précise le fait que les arrhes doivent être restituées quand le contrat cesse pour causes qui n'attirent pas la responsabilité des parties (cas d'annulation du contrat principal, cas fortuit ou cas de force majeure).

Il y a deux types d'arrhes: les arrhes de confirmation et les arrhes pénitentielles.

La *caparra confirmatoria* (fr.: arrhes de confirmation ; r.: *arvuna confirmatorie*), „la vera e propria caparra” (les véritables arrhes, selon le dictionnaire Treccani), a la fonction de renforcer le contrat et de réparer le dommage subi en cas de non-respect du contrat. Elle est prévue par l'article 1385 du code civil italien:

„Si, au moment de la conclusion du contrat une partie donne à l'autre, à titre d'arrhes, une somme d'argent ou autres choses fongibles, lesdites arrhes doivent, en cas d'exécution, être restituées ou imputées à la prestation due. Si la partie qui a donné les arrhes est défaillante, l'autre peut résilier le contrat en conservant les arrhes ; si en revanche la partie défaillante est celle qui les a reçues, l'autre peut résilier le contrat et exiger le double des arrhes. Si toutefois la partie qui n'est pas défaillante préfère demander l'exécution ou la résolution du contrat, le dédommagement est régi par les normes générales.” (l'article 1385 du code civil italien)

La partie qui n'est pas défaillante peut insister pour l'exécution du contrat ou en demander la résolution ; en outre, elle peut ne pas se contenter des arrhes, mais intenter une action en justice pour obtenir réparation du préjudice.



Le traducteur doit faire attention si dans le texte italien on emploie le mot *acconto* ou *caparra*. La somme versée à titre d'acompte à valoir sur le prix d'achat ne peut pas être considérée comme des arrhes, à moins que les parties aient expressément convenu de lui attribuer cette fonction.

Tița-Nicolescu (2016) affirme que dans la loi roumaine, les arrhes de confirmation sont une nouveauté, étant réglementées par l'article 1.544 du Nouveau Code Civil. Leur fonction principale est de garantir l'exécution des obligations. Tout comme dans la juridiction italienne, elles ont le rôle de confirmer l'exécution des obligations et de pénaliser le débiteur. Les conséquences du non-respect des obligations sont les mêmes que celles décrites ci-dessus.

La *caparra penitenziale* (fr.: arrhes pénitentielles ; r.: *arvuna penalizatoare/arvuna-dezicere*), également appelée *arra penitenziale* ou *multa penitenziale*, a uniquement la fonction de montant à verser pour la résiliation du contrat:

„Si le contrat stipule le droit de résiliation pour l'une des parties ou pour les deux, les arrhes ont uniquement une fonction de montant à verser pour la résiliation. Dans ce cas, le résiliant soit perd les arrhes versées, soit doit restituer le double de celles qu'il a reçues.” (l'article 1386 du code civil italien)

Il n'y a plus la possibilité d'agir en justice pour demander le paiement des dommages-intérêts. Ce type d'arrhes est en fait une clause de dédit. Les arrhes pénitentielles s'appliquent si dans le contrat on prévoit le droit des parties de changer d'avis et de ne plus exécuter le contrat.

Selon Tița-Nicolescu (2016), les deux types d'arrhes se distinguent par les caractéristiques suivantes:

**Tableau 3:**

	<b>arrhes de confirmation</b>	<b>arrhes pénitentielles</b>
rôle	garantie de l'exécution de l'obligation	évaluation conventionnelle des dédommagements à payer par la partie qui renonce au contrat
prémisse	l'exécution du contrat sera réalisée dans de bonnes conditions	dès le début, les parties admettent la possibilité de se dédire et de résilier le contrat
effets en cas d'inexécution de l'obligation	<ul style="list-style-type: none"> <li>- la partie qui a donné les arrhes les perd ; la partie qui les a reçues rend le double</li> <li>- en outre, le créateur peut essayer de prouver l'existence d'autres préjudices</li> </ul>	<ul style="list-style-type: none"> <li>- n'importe quelle partie peut résilier le contrat, mais elle perdra les arrhes versées ou bien elle restituera le double des arrhes reçues</li> <li>- il n'y a pas de responsabilité contractuelle</li> <li>- il n'y a pas la possibilité de demander des dommages-intérêts supplémentaires</li> </ul>

Dans les conditions générales de vente d'un outillage industriel, l'emploi du mot *arvună* (au lieu des mots *accont* ou *avans*) implique le fait que toutes les sommes payées à ce titre seront perdues par l'acheteur au cas où le contrat n'arrive pas à bon fin:

(19) „La venditrice avrà la facoltà di considerare quale caparra tutti i pagamenti fatti fino al 30% del prezzo globale convenuto.” (Vânzătoarea va putea considera ca arună toate plățile făcute până la 30% din prețul global stabilit.)

Dans un procès-verbal du conseil d'administration on mentionne le pouvoir d'une personne de signer un contrat préliminaire d'achat-vente et de verser des arrhes pénitentielles. On ne peut traduire *caparra penitenziale* ni par *acont*, ni par *avans*. De plus, on ne peut pas omettre l'adjectif *pénitentiel*, en traduisant par *arună*, car toute une série de conséquences et de caractéristiques ne seraient plus prises en compte en cas de non conclusion de l'acte définitif ou en cas d'inexécution du contrat:

(20) „L'operazione prevede la sottoscrizione di un contratto preliminare con il versamento al momento della sottoscrizione di una caparra penitenziale [...] e successivamente il pagamento della restante somma al momento della sottoscrizione del contratto definitivo.” (Operațiunea prevede semnarea unui antecontract cu virarea, în momentul semnării, a unei arvune penalizatoare [...] și plata ulterioară a sumei rămase în momentul semnării contractului definitiv.)

Les caractéristiques principales des arrhes sont les suivantes:

- une partie du prix final, acquittée en avance, qui peut être retenue en cas de non conclusion du contrat définitif ;
- existence de la possibilité de dédit pour les parties ;
- pénalités pour la partie qui reçoit les arrhes ;
- rôles: confirmer la conclusion d'un acte préliminaire, pénaliser les parties.

### 3. Conclusions

Nous avons présenté les diverses acceptions juridiques de quelques termes spécialisés qui, dans la langue courante, semblent avoir à peu près la même signification. Le traducteur ne peut pas se contenter de consulter les dictionnaires bilingues, car ils présentent ces termes comme étant des synonymes.

Il y a des similitudes évidentes entre l'acompte, l'avance et les arrhes. Ce sont des paiements partiels qui confirment l'existence d'un accord. Les sommes avancées devraient être déduites ultérieurement du prix de vente final.

Pourtant, le régime juridique de ces termes est distinct. Le traducteur devrait connaître les divergences entre leurs acceptions juridiques et opter pour le correspondant roumain le plus approprié. Dans le cas contraire, les parties pourraient s'engager à verser un acompte non remboursable, à signer un engagement irrévocable, à payer des pénalités, à respecter des délais de rigueur ; à renoncer à une garantie ; à conclure un autre contrat plus tard (le contrat définitif). Pour réaliser une traduction de qualité, il est important d'allouer assez de temps à la documentation et d'essayer de comprendre toutes les subtilités des documents.

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## UBER DAS UNTERRICHTEN VON VERBEN IN DEUTSCHER SPRACHE

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**Abstract:** *The paper presents the way foreign languages are taught at economics students, especially the verb. The paper is about the methods of teaching the verb, modern and old fashioned once. The first part of the paper pictures the history of teaching foreign languages, the methods of teaching foreign languages changed constantly during the centuries in accordance to the historical changes. Till the end of the 19<sup>th</sup> century the scientific languages were Latin and Greek, after that when the new political power like England and France imposed themselves, the new scientific languages became English and French. The paper reviews the foreign methods of teaching foreign languages: the translation method, the audiovisual method, and communication oriented method. After that the paper presents the theoretical background of the verb with different times and tenses, present in the curriculum of economics. The last part presents the exercises the students are asked to solve, the mistakes present in their exercises, and the possible explanation for the mistakes present in their homework.*

**Keywords:** *teaching, verb, economics, students, tenses grammar.*

**JEL Classification:** *I21.*

Die Fremdsprachenunterrichtsmethoden haben sich ständig verändert und stehen im engen Zusammenhang mit den historischen Veränderungen. Am Anfang unterrichtete man nur Latein oder Griechisch als Fremdsprache. Diese zwei Sprachen gelten als Kultur- Wissenschaft und Religionsprachen. Mit dem Einfluss der neuen Mächte werden neuen Sprachen eingeführt wie Englisch und Französisch.

Die Zeiten ändern sich, so wie die Unterrichtsmethoden, die sich an die aktuellen Bedürfnisse der neuen Gesellschaft anpassen. Die neue Tendenz ist die lebendige Sprache zu benutzen. Bis Ende des 19. Jahrhunderts wurde die Grammatik-Übersetzungs-Methode benutzt. Man verwendete literarische Texte für Lektur und Übersetzung.

Die Audiolinguale oder Audiovisuelle Methode ist Teil der behavioristischen Methoden, die sich in den 40er Jahren in den USA durchgesetzt hat. Man verwendet Kassetten und CD-Roms, Audiokurse mit Lehrbüchern und Computer. Man legt viel Wert auf das Sprachkönnen und nicht auf das Sprachwissen. Auf die erste Stelle steht der Student und die mündliche Kommunikation. Beim Unterricht verwendet man nicht mehr die Muttersprache, sondern die Fremdsprache.

Eine andere Methode aus den 70er Jahren ist die kommunikativ-pragmatisch-orientierte. Im Mittelpunkt steht der Student, der Lehrer ist nur Helfer im Lernprozess. Man verwendet Sachtexte, die mit der Realität eng verbunden sind.

Wenn man Grammatik unterrichtet, soll man an der Realität enge Texte als Einleitung nutzen. Die Texte sollen die Aufmerksamkeit der Zuhörenden gewinnen. Eine originelle und packende Eröffnung erfordert eine sorgfältige Vorbereitung und sollte am besten erst geplant werden, nachdem der Vortrag erarbeitet worden ist.

Es folgt ein kurzer Überblick in das Thema, die Studenten sollen dadurch wissen, was sie erwarten sollen.

Im Hauptteil werden thematisch relevante grammatische Daten präsentiert. Es hat sich als grosser Erfolg erwiesen, danach einen Überblick über die ersten kerninformationen zu geben. Anschliessend kann diese dann im Detail ausgeführt werden. Diese Details werden mit Beispielen und visuellen Mitteln dargestellt.

Grammatik spielt eine wichtige Rolle bei der Erlernung einer Fremdsprache, obwohl man eine Sprache sprechen, ohne jemals Grammatik gelernt zu haben. Bei der Grammatik ist die Kommunikationsfähigkeit vor allem mit sprachlicher Korrektheit verbunden. Die Grammatik ist wie ein Werkzeug. Es unterstützt dabei, über Vergangenes und Zukünftiges zu sprechen, regelmässigkeit auszudrücken, irrealer Wünsche zu formulieren, höflich zu sein. Der Grammatikunterricht ist eine Disziplin, die Geist und die Logik schult. Die Grammatik und besonders die deutsche Grammatik kann man besser in der Muttersprache erklären. Die Grammatikthemen kann man besser durch eine gute Visualisierung erklären.

Wir werden jetzt ein Beispiel von einem Grammatikunterricht darstellen. Der Unterricht beginnt mit einem Text, der aus verschiedenen Perfektkonstruktionen besteht. Die Studenten lesen den folgenden Text, sagen den Lehrern was sie verstanden haben. Danach unterstreichen sie die unbekannten Konstruktionen. Den Text kann man unter [www.graf-gutfreund.at](http://www.graf-gutfreund.at)© copyright by IGG finden.

„Meine Geschichte

Ich heie Hatice. Ich bin in einer kleinen Stadt in der Trkei geboren. Mit meiner Familie habe ich in einem schnen Haus am Fluss gewohnt. Dort hat es auch einen Garten gegeben. Im Sommer habe ich mit meinen Schwestern und Freundinnen drauen gespielt. Meine Brder haben im Fluss gebadet. Am Wochenende haben uns oft meine Verwandten besucht und wir haben im Garten gegrillt. Das waren sehr schne Tage und wir hatten viel Spa. In meiner kleinen Stadt bin ich zur Schule gegangen. Ich habe 5 Jahre die Volksschule besucht, danach 3 Jahre die Mittelschule und anschlieend 3 Jahre das Gymnasium. Ich wollte immer einen Beruf lernen und so bin ich Sekretrin geworden. 5 Jahre habe ich im Gemeindeamt gearbeitet. Mit 23 habe ich mich mit Murat verlobt. Seine Schwestern habe ich schon gekannt, sie waren in der gleichen Schule wie ich, doch ihn nicht, denn er ist schon vor vielen Jahren nach sterreich gegangen um zu arbeiten. Nur jeden Sommer ist er zu Besuch gekommen. Ein Jahr spter haben wir geheiratet. Ein paar Monate nach der Hochzeit bin ich nach Wien gekommen. Hier war alles anders, die Menschen, die Huser, die Sprache, die Straen. Die Leute waren nicht sehr freundlich und die Nachbarn im Haus sind immer sehr schnell an mir vorbeigelaufen und haben mich nicht angesehen. Alles war so ruhig wie auf dem Friedhof. Unsere Wohnung war ganz klein. Wir hatten kein Badezimmer, nur eine Duschkabine in der Kche und die Toilette am Gang -so etwas gibt es in der Trkei nicht. Im ersten Jahr habe ich mich sehr einsam gefhlt und ich habe oft geweint. Ich habe mich nach meiner Familie gesehnt, nach meinen Freundinnen, einfach nach Allem, meinem Leben, wie es frher war. Ich war den ganzen Tag allein, denn Murat hat in einem Restaurant gearbeitet und ist jeden Abend erst sehr spt nach Hause gekommen. Nach einem Jahr habe ich unser erstes Kind geboren - ein Mdchen, sie heit Yildiz. Langsam ist es mir besser gegangen. Ich habe angefangen, Deutsch zu lernen und ich habe trkische Freundinnen gefunden. Gemeinsam sprechen wir immer ber unsere Erinnerungen an die Heimat, aber auch ber die sterreicher, nur haben wir

keine österreichischen Bekannten." <http://documents.tips/documents/perfekt-grammatik-deutsch.html>

Die Studenten konnten nur 86% von Perfektkonstruktionen identifizieren, aber sie konnten mit eigenen Wörtern den Text im Präteritum wiedergeben.

Der Lehrer stellt die theoretischen Aspekte des Perfekts.

Perfekt ist eine Vergangenheitsform.

Perfekt wird durch die konjugierte Form des Hilfsverbs „haben“ oder „sein“ und dem Partizip Perfekt am Satzende gebildet.

Perfekt = haben oder sein .....Partizip Perfekt

Es gibt 2 Kategorien von Verben: regelmässige und unregelmässige:

Regelmässige Verben

Bei regelmässigen Verben fügt man zum Verbstamm: Präfix „ge-“ und Endung „-t“ zu .

machen - ge - mach – t, kochen - ge - koch – t, spielen - ge - spiel - t

Ich habe schon Lebensmittel gekauft.

Bei Verben, deren Verbstamm auf „-t-“, „-d-“, „-tm-“, „-chn-“, „-ffn-“ endet, fügt man zum Verbstamm: Präfix „ge-“ und Endung „-et“ zu.

warten - ge - wart – et, baden - ge - bad – et, atmen - ge - atm - et

Unregelmässige Verben

Partizip Perfekt von den unregelmässigen Verben muss man auswendig lernen. Es endet meistens auf „-en“:

sprechen – gesprochen - Mit wem hast du im Park gesprochen?

schwimmen - geschwommen - Gestern habe ich den ganzen Nachmittag geschwommen.

Trennbare Verben

Bei regelmässigen und unregelmässigen trennbaren Verben steht das Präfix „ge-“ zwischen dem Verbpräfix und dem Verbstamm.

einkaufen -ein -ge -kauf –t, ausfüllen -aus -ge -füll – t, aufstehen -auf -ge -stand – en. Da haben wir viel eingekauft.

Es gibt eine Gruppe von Verben, die den Partizip Perfekt ohne „ge“ konstruieren.

Zu dieser Kategorie gehören die regelmässigen und unregelmässigen untrennbaren Verben, die mit: „be-“, „ge-“, „emp-“, „ent-“, „er-“, „miss-“, „ver-“, „zer-“ anfangen.

bestehen -bestand –en, gefallen -gefall –en, empfinden -empfand –en, entschuldigen -entschuldig –t, ergänzen -erganz –t, missbrauchen -missbrauch –t, verstehen -verstand –en, zerstören -zerstör –t .

Ich habe alle Übungen ergänzt. Er habe schon versucht, dich zu finden.

Verben mit Endung „-ieren“ haben kein „ge-“ und sind immer regelmässig.  
informieren → informier – t, studieren → studier – t

Hast du es schon kontrolliert? Hast du ein Virenprogramm installiert?

Perfekt mit „sein“

Das Hilfsverb „sein“ benutzt man, wenn das Verb:

- Bewegung des Subjekts von A nach B: „kommen“, „gehen“, „laufen“, „springen“, „ziehen“ ausdrückt:

Wir sind nach Wien gekommen. Er ist erst spät nach Hause gekommen.

Ich bin ins Kino gegangen. Sie ist vor kurzem von der Türkei nach Deutschland gezogen.

- bei Zustandsänderung des Subjekts, wie: „aufwachen“, „einschlafen“, „wachsen“, „sterben“:

Ich bin sofort eingeschlafen. Du bist aber groß gewachsen!

Hermann Hesse ist 1962 in der Schweiz gestorben.

- bei Verben:

sein → Ich bin gestern im Kino gewesen.

werden → Sie ist Mathematiklehrerin geworden.

bleiben → Die ganze Woche ist er wegen der Grippe zu Hause geblieben.

passieren → Was ist passiert?

geschehen → Was ist geschehen?

begegnen → Ich bin ihm im Park begegnet.

Perfekt mit „haben“

Das Hilfsverb „haben“ benutzt man bei allen Verben mit Akkusativergänzung. Ich habe die reservierten Karten für die Sonntagsvorstellung abgeholt. Sie haben das gleiche Kleid gekauft. Was hast du ihr gegeben? Ich habe den Berg schon mehrmals bestiegen.

Das Hilfsverb „haben“ benutzt man bei allen reflexiven Verben.

Die Kinder haben sich vor dem Schlafen gewaschen. Ich habe mich an das Fenster gesetzt.

Die Studenten bekommen all diese Informationen auf Computer, der Lehrer erklärt die Regeln, die Studenten können sich das besser visualisieren. Danach bekommen sie eine Tabelle, die sie mit Verben von den Text mit Infinitiven ausfüllen müssen.

Perfekt Infinitiv

habe gewohnt wohnen

bin gegangen gehen

Nur 73% von den Studenten konnten die Tabelle korrekt erledigen.

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## THE USE OF TECHNOLOGY FOR LEARNING LANGUAGES

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**Abstract:** *What if the overused mobile phone that sometimes drives parents and teachers crazy could eventually emerge as an unexpected still valuable aid in teaching foreign languages? It might seem magic, still it may work. It is called MALL (Mobile Assisted Language Learning). Nowadays the ways that people access information have become increasingly mobile, the new devices enabling students to learn on the go. Studies reveal that people spend so much time on smartphones that it will soon surpass - if it has not already- the internet usage spent on desktop computers. Mobile technology has altered not only our way of interaction and communication, but also how we gather information and learn. Universities have sensed the new trends and consequently have developed many online programs that have mobile apps for students who might view their phone or tablet as an important tool in their education. This tool is becoming an increasingly critical component of the online learning experience and also ensures that students learn voluntarily in an interactive, fun and adaptable way. We truly believe in the importance of technology in the classroom and e-learning for teaching. Thus, the current paper intends to review mobile technology as a means of education with all its potential; it will first focus on definitions and principles of terms like mobile technology and mobile learning and their applicability for Romania; then we will outline the challenges of integrating technology in the learning process, as well as the opportunities provided; useful mobile applications, such as British Council apps, Duolingo, Real English, Whatsapp and Facebook with their pedagogical implications in the process of second or foreign language learning context will constitute the examples of technology driven facilities showing how much freedom resources and learning materials technology can offer; the possibility to teach students from all corners of the globe, anytime is the value added to the above mentioned.*

**Keywords:** *mobile technology; language learning; m-learning; MALL; challenges; benefits.*

**JEL Classification:** Y90; Z00.

### **1. Introduction. Mobile technology**

It is only after several decades that computers have been introduced as education instruments, that the revolutionary assault of mobile devices is facing the whole world with new challenges as learning experiences with technology; and this is because phones are the mini form of PCs with the additional advantage of portability-a prevailing benefit over laptop computers.

Mobile technology is the technology used for cellular communication, it is exactly what the name implies - technology that is movable, portable. Some examples of mobile IT devices include: a) laptop, tablets and netbook computers; b) 'smart

phones'; c) global positioning system (GPS) devices; d) wireless debit/credit card payment terminals.

The use of mobile and wireless devices in almost every domain of our activity-communication, socialising, playing, shopping, doing business - has naturally touched education and thus it has led to radical changes in teaching and learning. Being so popular, mobile phones are considered potentially valuable learning tools. However, students' personal use of mobile phones and their apps for learning benefit is still open to research.

Computers are still used in classes when teaching foreign languages, along with the whiteboard and the video projector. Nevertheless, the new mobile and wireless devices eliminate any type of barrier, teachers being able to interact with students in both formal and informal learning contexts.

### **1.1. M-learning- mobile learning**

As the name suggests, mobile learning (or m-learning) is the ability to learn anywhere and at any time using a portable electronic device that has the potential of becoming a recognised type of education; provided via Internet or network and using personal mobile devices such as tablets, smartphones, pads, pods to get learning materials through mobile apps, social interactions and online educational hubs it is a flexible approach able to create interesting activities, to stimulate participation anywhere, anytime (Kukulska-Hulme & Shield, 2008).

Some researchers define mobile learning as a type of enhancing knowledge that takes place with the help of mobile devices, a process of gaining knowledge through conversations across multiple contexts among people using interactive technologies with a focus on contexts (Sharples et al., 2007). As Pęcherzewska & Knots (2007) show, among all mobile devices, mobile phones are the most commonly used; they seem to hold some prevailing advantages both for learning in general, and for language learning in particular facilitating the access to authentic content, communicative language practice, and task completion (Chinnery, 2006). On the other hand, as Steel rightly notices, 'few studies have investigated students' personal use of mobile apps for learning and the learning benefits' (Steel, 2012).

### **1.2. MALL- Mobile Assisted Language Learning**

Mobile assisted language learning falls under the umbrella of assisted learning; it specifically refers to language learning anywhere anytime by means of devices ranging from MP3/MP4 players, smart phones, and e-books to laptop and tablet computers, that is from anything that creates an interactive learning environment with multiple contexts using different kinds of applications available in the mobile device.

Mobile assisted language learning is still a 'young' and 'fresh' domain of study, even though more than 550 of work relating to it have been published over the past two decades. The topics approached cover a wide range of technical considerations, pedagogical preoccupations, learning theory, motivational effects, institutional infrastructure, and teacher training. Both students and most of the teachers seem to have embraced the idea of mobile learning with a lot of enthusiasm. Nevertheless, there should be a special attention dedicated to the design of the tasks of MALL: they should be short, interactive and engaging, user-friendly, culturally and politically correct. These requirements met, they prove an enormous potential for learning. (Stockwell & Hubbard, 2013)

## 2. Integrating technology in the learning process

First question: could learning really happen through mobile technology?

Integrating technology into the learning process is a long-term strategy as the mobile revolution is here. Originally, mobile phones have had a bad reputation in schools worldwide, but this is about to change. Mobile phones cannot be banned in spite of all kind of efforts; so, instead of interdicting them, as Jonathan Wylie exemplifies in his blog article *Mobile Learning Technologies for 21st Century Classrooms*, some forward-thinking teachers try to do something about them: such is the case of The National Council for Curriculum and Assessment in Ireland, which is currently in an advanced phase of an interesting experiment with the use of cell phones in a number of Irish schools. Most students speak English as their first language, but Irish language lessons are encouraged to maintain a link to Ireland's cultural past. The NCCA program aims to increase the level of oral fluency in Irish by providing students with cell phones to support them in language classes. Students are sent text messages with Irish vocabulary words to use during classes, and call a number with a voice-response system to leave answers to teacher questions. It is just a mere example of how systems and educational institutions as well as teachers become more open and move toward mobile learning in the classroom benefitting from a new wave of electronic devices that offer portability and ease of use.

It was in 2001 that Marc Prensky warned in his article 'Digital Natives, Digital Immigrants' that: 'Our students have changed radically. Today's students are no longer the people our educational system was designed to teach.' He states that not clothes, music, language, slang or style makes them radically different, it is digital technology that makes the difference. Their exposure to gadgets and technology is more striking that it has ever been before, and it has crucial effects on the way children behave and later on, learn. Harsh as it may sound, 'today's average college graduates have spent less than 5,000 hours of their lives reading, but over 10,000 hours playing video games (not to mention 20,000 hours watching TV). Computer games, email, the Internet, cell phones and instant messaging are integral parts of their lives' (idem, ibidem). They seem to be more involved in learning when they use the latest technological gadgets, and this is just because this is what they are used to. The conclusion is that nowadays students do not just want mobile learning, they need it.

Next question: is it applicable to Romania, too?

According to an IPSOS Research for MasterCard during the summer of 2016 that compiled data from 23 countries, Romanians are the most optimistic of the Europeans regarding the positive effect of the innovation over the society, so that 82 percent of them believe that innovation is beneficial for society, with a greater share than developed countries such as France (64 percent), Germany (70 percent) or UK (74 percent). Moreover, the study reveals that the main fields where Romanian respondents said they would like to see more innovation are education system (53 percent), public transport (47 percent) and healthcare system (44 percent), 'said the IPSOS Research, <http://www.business-review.eu/tag/smartphones-in-romania>. The same study points out that Romanians are regional leaders regarding the persons who own more than one smartphone and use it for at least four hours daily. Consequently, the use of mobile technology for education and integrating it in the learning process seems more than legitimate.

Another survey carried out by Mercury Research in September 2013 via face to face interviews on 1,200 respondents above 14 says that one in ten Romanians owns a smartphone, thus, 12 percent of Romanians above 14 have a smartphone and 5 percent have a tablet, says the survey <http://www.business-review.eu/tag/smartphones-in-romania>.

The research mentions the widespread usage of smartphones and tablets among high-schoolers and students, young people up to 35 years old, and people with higher education. However, some of these smartphone and tablet users do not connect to the internet via these devices. High-schoolers and students are ahead of the crowd, with 8 percent of them owning both a smartphone and a tablet. Nevertheless, it is said that only 12 percent of pupils and students who own a smartphone and 18 percent of tablet owners do not go online from their device, <http://www.business-review.eu/tag/smartphones-in-romania>.

### **2.1. Challenges of integrating the mobile technology in the classroom**

As the response to the question whether it is sustainable to integrate mobile technology in Romania is positive, there are several technical points to be considered.

a. Teachers themselves have to engage more in technology so as to be able to implement it in the classroom. It is a very serious issue, because 'the biggest problem facing education today is that our Digital Immigrant instructors, who speak an outdated language (that of the pre-digital age), are struggling to teach a population that speaks an entirely new language' (Prensky M., 2001).

b. Teachers have to learn how to communicate with students, it is not the meaning of what is to be taught that has to be altered, it is the about being faster, skipping step-by-step explanations.

c. The content to be studied should also be updated, the traditional curriculum: reading, writing, mathematics, logical thinking, learning about the past still remain important, but it is from a different era. They will emerge in them up to a point, but then, the digital curriculum including software, hardware, robotics, along with politics, sociology, languages will prevail. These are all very attractive to students, but how many educators are going to be prepared to provide them?

d. Materials could also be a problem, still there are plenty of successful examples testifying the adaptation to the digital and mobile by means of computer games, digital textbooks and course books even from elementary school. Rethinking the materials needs to be applied to all subjects at all levels. Specialists even offers solutions: for math, the suggestion is to focus more on the math of the future, that is approximation, statistics, binary thinking; for geography, he considers, there is no reason to worry 'that a generation that can memorize over 100 Pokémon characters with all their characteristics, history and evolution can't learn the names, populations, capitals and relationships of all the 101 nations in the world. It just depends on how it is presented'. For instance, teachers can use the dictionary and thesaurus on Dictionary.com, explore the world with Google Earth, or plot equations with Quick Graph, create your own stories with Story Kit, and find out about the latest space missions with the NASA app., and these are just a few examples of free downloads that are ideal for educators to use with their students in the classroom. The Elements is an amazing interactive periodic table, Alphabet Fun teaches handwriting, number and letter recognition, and the Beautiful Planet HD app is a visually stunning photographic tour of 160 different countries. What about

reading or e-reading? Is there really a place for these in the classroom? For instance, in America, the Governor announced a digital makeover for California's school textbooks. The future, as he saw it, was eBooks. They are portable, easy to update, and cost-effective, and can be read on netbooks, e-readers, laptops, and more. In Romania, first graders and not only, receive a digital version of their textbooks. Thus, it is only a matter of time before all states start to follow and welcome e-books into their own curriculums.

e. Teachers have to be aware it involves a lot of personal research in order to find and test suitable apps.

f. While using mobile technology, students may become distracted by social media instead of focusing on the lesson. There are examples supporting the idea of using social media as well in the educational process: 'Why don't you post an image of your work on your Facebook page?' is more engaging than 'We don't use Facebook in this class'.

g. Teachers need to meet the policy of the school in point of mobile learning, in case there is one.

It is anyway clear that mobile devices may help create a more relaxed, involving and personalized learning environment. It requires more personal work for teachers but it also pushes them further towards their own professional development, while proving an updated, versatile and more attractive learning atmosphere.

## **2.2. The benefits of using mobile technology in the learning process**

In spite of all difficulties that may appear, technology has to enter classrooms, teachers have to start acting. As the new generation is counting on them. Among the multitude of benefits of using mobile technology in the educational process here are some worth mentioning:

a. It prepares students for the future for the real life as using mobile devices will not only be a part of students' everyday lives as adults, but it will also be vital part of many their future careers.

b. Students no longer use printed dictionaries or encyclopaedias these days when they have mobile devices enabling them to instantly access the needed information, so they are always well informed with the most up-to-date information.

c. Digital textbooks may be an alternative to the traditional ones. Sometimes the information provided by textbooks may not be the most relevant or attractive for the present generation of students: they may not be captured by the literary masterpieces they have to read, or may not want to learn by heart accounting information that may be easily accessed on their mobile devices. Thus, having digital textbooks on their mobile devices keeps students more organized and gives them easy access to their materials.

d. Learning goes beyond classroom walls. Allowing students to use their mobile devices in school will prolong the learning even after school classes; students love technology so they are likely to be excited about it and continue learning outside of school hours. If students are really excited about studying inside the classroom, they are likely to continue learning outside of it and they can do so with mobile technology. Thus, integrating mobile technology in education can transform the process into something more captivating and appealing than anyone could have ever imagined.

### 3. Apps that can be used for learning English in general and business English in particular, on the go

There are numerous mobile phone apps available for learning foreign languages therefore it is very likely to find free options suited to students on a budget. Here is a very short list of free apps that students can use for extra practice that we chose as we have tried them with our students and it worked:

*British Council apps* offer a huge choice for smart phones. The multitude of options on the webpage and the downloadable apps on Google Play, Apple's App Store or using a QR code make it a user-friendly choice. It covers almost all the skills: listening, writing, reading, grammar and vocabulary drilled through exercises and games which add more fun to the learning and addresses to all ages. In point of the vocabulary there is even a business & work chapter that provides materials useful for reaching the professional aspirations of the learner by developing the needed skills; and it may be achieved with the help of a series of professional podcasts meant to improve English for specific purposes and covers a large number of business and work themes, of articles that also focus on improving the language needed for getting the desired career and useful videos presenting all the steps of getting hired.

*Duolingo* is a wonderful app that has won the 'Best education start-up award', designed like a game that may become rather addictive. The ultimate goal is to give everyone access to a private tutor experience through technology. Its slogan *Learn a language for free. Forever* announces from the very first encounter that the application is free and that it has a long-lasting result; some of its advantages as presented by the designers themselves is that it makes learning fun and it is universally accessible. The learner starts with a placement test that establishes the level of language so the learner knows where s/he starts from and s/he is permanently informed regarding the progress, which is really challenging and effective; the app also sends daily reminders on the device and another detail worth mentioning is that the app contains no adverts. The time to spend daily is also the learner's choice; all the skills are trained, speaking included. It is structured on vocabulary areas, starting with basic words and expressions that are rehearsed over and over testing all skills, then there is a progress test after each group of seven chapters. The courses are structured in a way like games as well—you earn skill points as you complete lessons, and if you make mistakes you lose 'lives.' If you lose too many, you will have to start the lesson all over.

*Real English* offers a variety of apps at different levels – business and conversation apps at beginner, intermediate, and advanced levels as *English is power, money and prestige!* according to their homepage. It also offers information on how to study, level test, vocabulary, and lesson and in progress icons. They are free, but they contain adverts. Each app contains 20 lessons that focus on specific grammar/vocabulary areas. Each lesson is made up of five parts.

These three apps are possible adjuvants to what the learning that happens in the classroom and may become valuable additional activities that may win over just playing games.

Moreover, there are other apps offering educational possibilities that may encourage students to be creative and use the technology that is literally at their fingertips to prepare learning activities.

*Whatsapp* is a free mobile messaging app which allows the very fast exchange of messages. It was created in 2009 by two former employees of Yahoo! Who wanted

to build a better SMS because as they predicted, everyone would have a smartphone. Its name is a pun of the phrase 'What's up?' The app has a free subscription and is available on a multitude of mobile devices. Users can create groups, send each other unlimited images, video and audio media messages over an internet connection. Its usefulness is presented in all spheres of existence from personal life, to professional career: doctors in India use Whatsapp to instantly send electrocardiogram pictures to save lives, mountain rescuers in Spain use the app to locate the lost hikers, volunteers use it for the charity work in Uganda and all these place Whatsapp among the first three social messaging apps on smartphones. Thus Whatsapp may also be an unconventional way to practice English.

*Facebook* and *Closed Facebook groups* can be another great way of communicating with students. Facebook is a free social networking website that allows the creation of online pages to connect with friends, family or make new friends anytime, anywhere. It was created in 2004 with the intention of offering people 'the power to share and make the world more open and connected'. Consequently, on their Facebook pages, people may share pictures, personal information, may send messages, videos, join groups, and add applications. Facebook Groups can be: open, closed, or secret depending on the public/private preference. A public Facebook page is available for anyone to see and this is a useful way to communicate and promote information to people in the neighbourhood and beyond. Closed groups provide members with a sense of legitimacy: they know that the people in the group have gone through an approval process; the group allows users to participate in a collaborative form so as to construct knowledge, because they provide tools for creating and sharing information, it may help build a class community and enrich learning; nevertheless it cannot be assumed that all learners will wish to participate. Still, benefitting from its popularity and social nature, Facebook has numerous ways to be integrated in the language courses so as to encourage target language production.

Here are some activities that can be used in the language learning classes:

Using Whatsapp: students are sent a short news article or podcast and then asked to react by sending back an audio response summarising it in their own words or giving their opinion; students could send photos with captions to illustrate different tenses or alternatively they could describe daily habits or routines, or create a set of instructions; students could create a video or audio of themselves making a short business presentation or reviewing a movie/book or TV show.

Using Closed Facebook groups: teachers post quizzes and grammar tips; students are asked to share book reviews; there could be organised brainstorm ideas about different topics, teachers may assign different themes weekly and get students to share songs, pictures and quotations connected to the theme. We have used and still use Closed Facebook group successfully as it has already been shown in the article *The Impact of Social Media on Vocabulary Learning Case Study Facebook* (2014).

These alternative means of teaching and learning are designed to create a place for students and teachers to interact outside the classroom; if teachers are open and smart enough to supply students with easily accessible tools for studying on the go, they actually enable them to incorporate self-study into their busy lives, accelerating their progress and guaranteeing better results.

#### 4. In conclusion

Learning has become totally different along with the development of mobile technology which offers teachers and students a more flexible approach, turning it into a faster and perhaps easier activity, and definitely a more challenging and funnier one. Computers are great, but mobiles offer learners more freedom, enabling them to use technology in the classroom, in the school garden, in the study hall, and even on trips. And this is really great as we want to equip them from the world outside schools which is radically different from life inside them. Overcoming the possible difficulties that may appear both for teachers and with the shortcomings of the system, and valuing the benefits around the corner, mobile technologies will provide a response to a large part of current educational systems challenges. As more and more supporters claim, now is the time to act as our 'digital natives' count on us.

To conclude, by supplying our students with easily accessible tools for studying on the go, we are enabling them to incorporate self-study into their busy lives, accelerating their progress and guaranteeing better results.

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## ASPECTS CONCERNING A EUROPEAN UNION OPENED OR CLOSED SOCIETY

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**Abstract:** *In this paper we tried to underline the decisional process in European Union which is related to the determination of the identity of the Union, answering to a several questions concerning the implementation of the European Union into an organization, the different relations with other organizations and with the international law. Qualifying as an international organization sui generis, EU developed a new legal order, deciding to create a supranational organization, formed by member states and their citizens. The integration process is a permanent challenge opened to new and the developing process for solving all the internal and external problems of the EU. Deepening democracy in the European Union has as a premise the idea that the values of democracy, as part of the European spirit, are basic guidelines for the development of new rules of law for shaping principles to guide the action of the institutions in formulating their acts. In time the European Union despite of the difficulties experiences was concentrated to be as close as possible to the European citizens. One of the nowadays difficulty from the point of our analysis is how to solve the time to wait in a tail to Schengen border? We appreciate that in time this difficulty will have negative effects direct to European Union economy and also with these political decisions the European Union will depart from the mains democratic values to a close European society.*

**Keywords:** *European Union; democratization; society; rights; identity; decisions*

**JEL Classification:** K33.

### 1. Introduction

A remarkable analysis of the democratization process by respecting Union law was realized by Olivier Costa. He notes that "Founding Fathers" were put into operation a hybrid institutional system, in wich the law should ensure coherence and effectiveness of assembly is also at the heart of European integration provides the common language of his actors and inter-institutional relationships regulator. (Costa, 2003)

The European Court of Justice, an institution with the role of interpretation of Community law and supervising the application of legislation, easily played a key role and has raised since 1960, two contradictory discourses. (Dehousse, 1998)

First, emanating from policymakers and resulting from the analysis of the most critical of the process of supranational integration and detailed denounced Court and very liberal fashion whereby judges interpret treaties to serve the purpose of European construction, to ensure the independence of institutions and give its own force of Community law. Judges were accused of openly promote European integration regardless of the permanence of nation states and the opinion of the main stakeholders who were citizens.

A second speech, delivered at the level most enthusiastic European integration, quickly took an opposite of this denunciation of "governance Community judges." He underlined the Court's contribution to compliance of European institutions and economic players and Member States of their commitments in the deliberately entered during ratification of treaties. Equally it falls to the Court "democratization" of the EU institutional system - in particular by strengthening the powers and influence of the European Parliament - and recognition of many rights of European citizens. Costa shows that responding denigrators "democratic deficit in Europe", advocates of European integration have thus relied on the existence of different paths that allow "any natural or legal person" to ask the Court to interpret or review the legality of a rule of Community law, to challenge certain decisions the Community institutions.

In fact, the European Court of Justice held early enough federal character of the Community judicial system and insisted on its implications for European citizens. Taking the European Community as a complete and coherent system of law protecting the rights and interests of individuals, to postulate a rapprochement between the European political system and citizens.

Costa shows that we can not deny the Union the character of "community of law" in the sense that individuals actually received since 1963 a very liberal interpretation of the principle prohibiting discrimination.

Equally, saying the direct effect of Community law, the Court has allowed individuals to invoke before national courts and to rely on a large number of individual rights not explicitly provided for in the Treaties. The Court also encouraged national courts to surround Commission - which has matters prejudicial to highlight the incompatibility of national rights with Community law.

Court has contributed to affirming the rights of citizens in a triple title: protection of fundamental rights, the right to information and the principle of subsidiarity. Equally, the judges favored the access of individuals to a Community legal protection, but it is essentially decentralized national courts and can not be considered as a tool to control the decisions and policies of the Union by individuals.

## **2. Concepts, achievements and reasons for European society**

Deepening democracy in the EU has a premise the idea that the values of democracy, as part of the European spirit, are basic guidelines for the development of new rules of law for shaping principles to guide the action of the institutions in formulating their acts so that the European Union is as close as possible to its citizens.

Over time it establishes a close link between the cultural center of European spirituality, aspiration European citizens to live in an area of freedom, prosperity and security, the European institutions to improve their regulatory framework.

Thus in literature, for example Wiener analyzes three phases of the development of international law of the European Union: 1. integration by building a supranational EU institutions; 2. Europeanization by institutional adaptation to particular rules; 3. Late politization (nachholende Politisierung), as the most complex socio-cultural adaptation process legal institutional vertical and horizontal dimensions. (Wiener, 2003)

As Pierre Jonckheer MEP known highlighted, the EU has developed a model law that allows a stabilization of the democratic institutional system and modernization of European societies.

It is an integration process by rules leading to a constitutionalisation construction, but at the same time is an approximation of various European companies leading to a more united EU institutions. (Pierre Jonckheer, [www. etopia/varia](http://www.etopia/varia))

The idea of "European citizenship" appeared soon after the formation of Communities but its institutionalization took place only after the European Council in Luxembourg, at which they decided the final form was introduced in the Maastricht Treaty in 1992.

Among the reasons that led to the introduction of European citizenship, the major looked encouraging free movement, reducing the democratic deficit within the European Union and the basis for building a European identity.

Of course they have expressed opinions that the European citizenship and identity are seen as a secondary fact, without interfering in any way nationally. The concept of "multiple citizenship" has been introduced to indicate that a person can take part at the same time, different plans.

The examples given in practice shows that some people recognize that part of the two communities. Migrants are often described as being of Scottish / British or Bavarian / German.

*Hofstede said that "almost everyone belongs to a number of groups and categories of people at once".*

Let us not forget the benefit that EU citizens have the right to reside in any Member State. Since the entry into force of the Schengen Agreement, which abolished internal border controls EU (not in Bulgaria, Croatia, Cyprus, Ireland, Romania and the United Kingdom) can pass easily from one country to another.

Lisbon Treaty promotes a Europe of rights and values, introducing the Charter of Fundamental Rights into European primary law and protect citizens. Also the Lisbon Treaty introduced to the citizen the right of legislative initiative. Therefore, a number of one million citizens coming from several Member States may request the Commission to submit a legislative proposal in areas falling within the competence of the European Union. (Cocoşatu, 2012)

Therefore, European society is a European company reformed and which gives more democratic rights to its citizens. In these circumstances, the European citizen has a fully rights and reciprocal obligations according to European norms. (Herchi, 2017)

### **3. Intensification of border controls - a viable solution for the future?**

It is true that lately intensified terrorist attacks in Europe. As a result, the EU institutions are working to protect our citizens from international crime and terrorism and to ensure access to local justice system and respect for citizens' rights across the EU.

Effective access to justice is a fundamental right, one of the founding principles of European democracies. In much of the EU - Schengen - people can move freely without controls at internal borders, but the flow of refugees has led some Member States to reintroduce border controls with other EU Member States. Just as the arrival of migrants affect some Member States more than others, the number of asylum applications is not distributed equally among them. In 2015, 75% of all asylum applications were recorded in only five Member States (Germany, Hungary, Sweden, Austria and Italy).

Recently, the EU has reached an agreement with Turkey to stop the uncontrolled flow of migrants. The agreement also provides legal channels through which

refugees come into Europe. Consequently, the number of refugees and migrants arriving in Turkey has been reduced significantly. For the moment, European officials appreciate that the wave of migrants is stopped in Turkey.

But the focus of our research is centered on current decisions taken with regard to the integration of Schengen border control. These controls are really the solution? Or, on the contrary, these causes make us to see the European space as a closed space?

To make an analysis, we took actual data by comparing how many people crossed in April 2016, and how many trucks transited through the Bors custom (one of the largest crossing points of the western border) by April 2017 after the decision (the Regulation (UE) 2016/399).

But the focus of our research is centered on the current decisions taken with regard to the integration of Schengen control at the Schengen borders. If these controls on the border are a real solution? Or does it, on the contrary, they cause us to see the European space as a closed space?

To make an analysis, we took concrete data by comparing how many people crossed the border in April 2016, and how many people went through Bors customs (one of the largest crossing points of the western border) in April 2017 after making the decision to intensify the controls.

According to the data provided by the authorities authorized at the Bors border crossing point in April, a total of 622,065 persons went to Hungary, out of which 164,528 by cars and 105,273 by auto trains. Compared to April 2017, a total of 725,658 people went to Hungary, out of which 185,773 were cars and 85013 auto trains.

We must mention that in April 2016, European citizens did not wait to cross the Bors border and at any other border, as expected in April 2017.

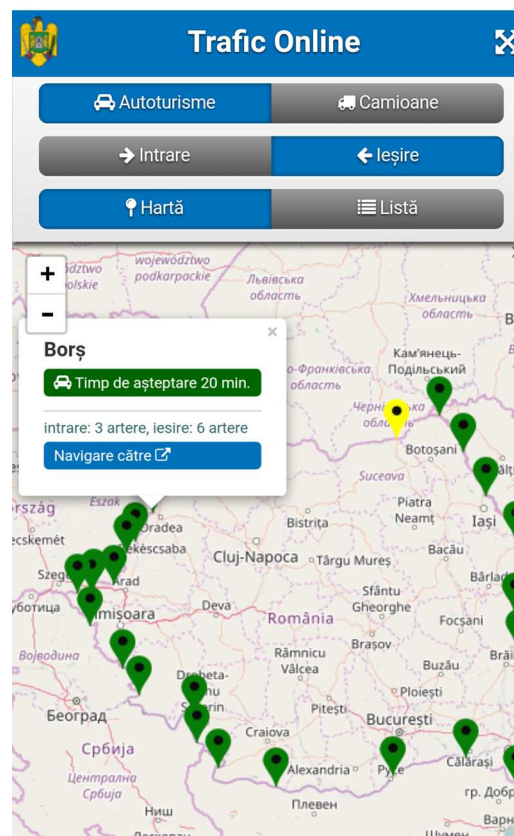
Analyzing the data, we are indeed seeing a decrease in the number of border crossings at Bors in April 2017 compared to April 2016. This is due to the opening of the Nadlac border crossing point, being connected to the highway. But, on the other hand, on cars there is a significant increase.

Moreover, what do we do with European citizens who work in Romania and live in Hungary beyond the border? For the moment the answer to this question is that they wait as the others to the border.

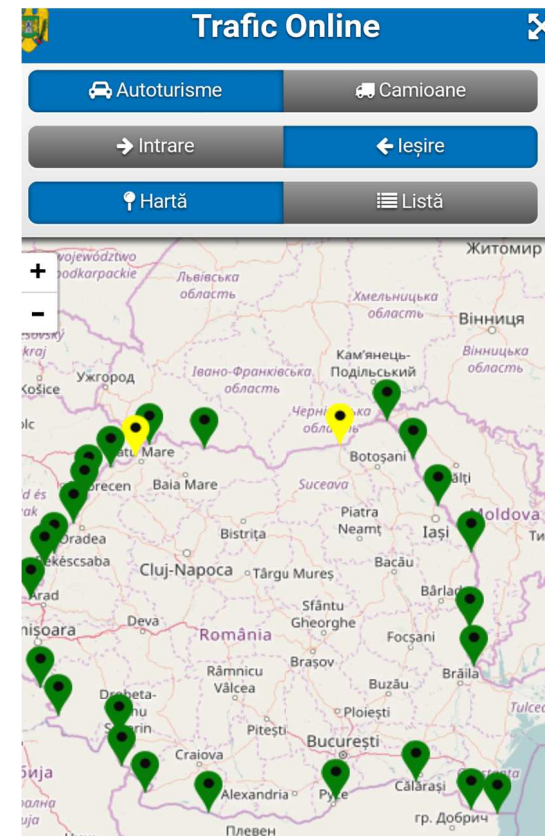
Any analysis of the factual situation on the ground leads to the conclusion that the Romanian border police implements and respects the decision taken at the level of the European Union, as do the Hungarian police.

But on the other side of the border, the Hungarian police lack personnel, so even if the decision to open more traffic arteries at the Bors border crossing point, only the border police in Romania could answer this request.

As an example of good practice, it is possible to give support to European citizens through the online study system of border crossing traffic, which may be the waiting time at the border. (<https://www.politiadefrontiera.ro/ro/traficonline/>)



**Figure 2:** Online application - presenting the waiting time to the Romanian borders  
<https://www.politiadefrontiera.ro/ro/traficonline/>, 8.05.2017,21:11



**Figure 1:** Online application -  
<https://www.politiadefrontiera.ro/ro/traficonline/>

We mention that this system offers only the waiting time for exiting Romanian borders and not the other ones. We are proposing joint cooperation in this respect, especially in nowadays case of intensify the border control.

**4. Appreciations and conclusions.** The year of 2017 have shown that political decisions in Europe were taken without any real, concrete analyze. We appreciate this decision as a decision determined by the fear of terrorist attacks. We appreciate this decision as a decision taken by the fear of terrorist attacks, which for a strong and united European Union should not be a fear. We also appreciate that if we look at the statistics at EU level, we see that the EU's gross domestic product in 2015, which reflects the amount of goods and services produced for the European economy, was higher than that of the US; EU GDP in 2015 being 14 600 billion. Let us not forget that approximately 62% of the total trade of Member States made within the EU. We believe that citizens in Romania and Bulgaria, who are Europeans like the Germans or Italians, are affected by the intensification of border controls, which began on April 7, 2017. After starting 1992, the EU area was transformed slowly in an area of free movement in the true sense of the word, the European citizenship, single currency, without customs control at the borders was introduced this additional control borders Schengen.

We appreciate that the European Union must build their security system, but consider that a detailed check at the border is not a barrier to terrorists or terrorism. Do not forget that those who have caused various terrorist attacks were Europeans of Muslim origin who resided in the EU for some time. So, growing up the border controls is not a barrier against terrorists but a high barrier to free movement of people and capitals. We hope, after a period of analysis, that policymakers reconsider border control from the perspective of building an open European Union and not closing it between "walls". We consider it appropriate to increase internal security by taking measures at the level of public order inside the European area and not at the borders.

In the European Union, because of its specific ways in which was built as a group of independent and sovereign states, are required contemplated other determinations of the concept of democracy is required to understand its content in relation to characteristics Union as international organization of states, even if it does not fit this category rigorous international law. Union and has always been, throughout its history, to the pressure of the socio - economic, the people of Europe are increasingly close and even linked, obliging it to seek institutional forms capable of ensuring the organization and her leadership, decision-making procedures to implement it on the one hand, efficient and on the other closer to the requirements of people living on the continent. From the point of view of the analysis, the intensification of border controls is not a barrier against terrorists but a high barrier against the free movement of persons and capital. We hope, after a period of analysis, that policymakers reconsider border control from the perspective of building an open European Union and not closing it between "walls". We consider it appropriate to increase internal security by taking measures at the level of public order inside the European area and not at the borders. We hope that the next decision won't be to introduce visas for citizens outside the Schengen zone.

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**SECTION: *MANAGEMENT, MARKETING,***  
***ECONOMIC INFORMATICS AND CYBERNETICS***



# LITERATURE REVIEW ON THE RELATIONSHIP BETWEEN ORGANIZATIONAL CULTURE AND PERFORMANCE IN QATAR'S PUBLIC SECTOR ORGANIZATIONS

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**Abstract:** *The relationship that exists amidst organizational culture and performance has never been a straightforward task to decipher. This is illustrated in this approach to the research problem. The research problem stems from the fact that organizational culture in a company is very significant to the success of any organization. The basic assumption is that an appropriate and strong organizational culture with motivated employees who accept the goals of enterprise affects the success. In light of the fact that the Qatari public sector attempts to perform better, the literature review has only helped to expound why its performance needs to be studied with respect to organizational culture. Therefore, the purpose of this article is to examine the relationship that exists between organizational culture and performance by reviewing the available literature. The review of the literature probably concludes that organizational culture is regarded as being part of the most prevalent notions in management and organization theory. Organizational culture is not only a vital feature in any organization. It is usually the main reason for remarkable performance in an organization. One imperative issues in the organizational science is the reason behind the success of some organizations and the failure of others. Culture of the organization influences everything that an organization does. A number of studies have discussed the critical importance of the organizational culture on organizational performance. A thorough secondary (literature) review of multifaceted selected worldwide sources/authors., such as books, journal articles, internet sources, etc. was conducted. The literature review leads to the conclusion that organizational culture and performance have mutually reciprocating relationship. Strong organizational culture usually leads to high performance and overall profitability. The study's findings will warrant incorporation of integrated organization's cultural models in improving efficiency in the Qatari public sector.*

**Keywords:** *organizational culture; profit; cultural change; corporate culture; behavior; Qatari public institutions.*

**JEL classification:** *M21; O15; M14; L33.*

## 1. Justification

The significance of this study rests on the fact that the Qatari public sector strives to perform with high effective standards. This study aims to comprehend how present day public organizations approach the countless facets of organizational culture and determine the relationship between organizational performance and culture of the company. The research problem derives from the premises that the organizational culture in a corporation is very important for successful organizational performance. The basic assumption is that an appropriate and strong organizational culture with motivated employees who accept the goals of enterprise affects the success. For an organization, performance evaluation of its

## MANAGING HIGH FLYER EMPLOYEES WITHOUT BOSSING THEM AROUND

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**Abstract:** *In this paper we emphasized the importance of the high flyer employees within an organization. These talented, creative people are sometimes sent away by bossing them around, instead of being retained and developed. This was our motivation for studying these issues. We underlined the advantages the bossless company has and the necessity for any organization to comply with the bosslessness principles. A very important advantage is that in this kind of companies there is more time for thinking of the company's future. The managers do not waste their precious time for telling constantly their employees what to do and how to do their job. The employees do not wait for the approval at any turn. Firstly, our objective was to find out whether/to what extent the high flyer employees are bossed at their workplace. Secondly, we were concerned about the ways managers can use to stop bossing people around at work. We presented ten main ways a manager can get started in his way towards bosslessness. We also presented seven ways the managers can use to manage high flyers. More than that, we emphasized that the bosslessness principles really want to connect people with the intrinsic motivation at work; we pointed here the power of self-manage, the power of information and the power of network. We chose the investigation as a research method for studying these theoretical aspects in practice. Our purpose was to find out how many out of 100 managers from Bihor county we questioned are managing and how many are bossing. We also wanted to find out whether gender or age influence the managers' behavior. We used for this purpose the statements from Table no. 1 presented below. The results show that managers are bossing more than managing. More than that, we found out, on the one hand, that men are bossing around people at work more than women, and on the other hand, that the middle-aged managers are bossing around people at work more than the younger or older ones. We concluded that many companies still use the bossness principles and we suggested seven ways, expressed as exhortations, that companies could take into account for managing the high flyer employees.*

**Keywords:** *high flyers; bossing around; talent; directives; self-manage; behavior.*

**JEL Classification:** *M10; M12; M14.*

### 1. Introduction

The high flyers are high performers and they are considered a valuable resource in any organisation. A wise manager is not only preoccupied to retain them by not bossing them around, but to use all their qualities. They must use them not just to get good performance from them but to extend their skills to others in the team. A company must have a strategic talent management plan. Firstly, they must improve the recruiting process by identifying high-quality candidates/high flyers. Secondly, this plan has to be concerned about being proactive instead of reactive; the companies must be able to anticipate the new opportunities before their competitors and especially make a move before them. They can easier do that if they have high flyers within their organization. Thirdly, they must identify the essential skills to be developed in all employees; the companies must not waste their money with unuseful trainings, but focus on key development areas. They can easier do that if they have high flyers within their organization because they can use them for teaching others without any additional cost.

Executives are focused on hiring and retaining talented employees because they know that much of the company's value lies in the employees' minds. They also know that the key to

success is knowing how to grow this value listening and understanding what really is in the employees' minds. A company needs talented managers in order them to motivate employees, overcome obstacles, create a culture of accountability, build trusting relationships, make informed and unbiased decisions for the good of their team and company. If a company is so lucky to find this kind of employees, they can be retained within the company by not bossing them, but managing.

Bossing people around at work means to constantly tell the employees what to do. However the employees need to be treated as adults; they do not need directives all the time. The organizations have to encourage a leadership who go further than bossing people around because the employees do not like being bossed, but managed. The difference is presented in Table below:

**Table 1:** The difference between managing and bossing

Managing	Bossing
Gets work done with and through others	Directs or demands activities
Asks	Tells
Focus on ongoing process	Focus on today's productivity
Negotiates	Orders
Reaching a goal is a series of action steps and behaviors which need to be negotiated and supported	Reaching a goal is a "result"
Work satisfaction and the integrity of the process and environment is the responsibility of management	Work satisfaction and the integrity of the process and environment is the responsibility of the employee
It is my responsibility to grow my people	It is my people's responsibility to grow themselves
The environment is a result and reflection of my management style	The environment is a result and reflection of my people's behavior
Feedback is objective and necessary	"They get to keep their job!"
Reinforces positive behavior	Criticizes discrepancies
Responsibly deals with non-performance immediately	Judges non-performance as lack of skills, commitment, motivation, or poor attitude

Source: Philippe Denichaud, John Parikhhal, How to tell the difference between managing and bossing (<http://www.btmgmt.net/how-to-tell-the-difference-between-managing-and-bossing/>)

It is most likely not to find talented employees in a company where the manager's behavior is describe by the "Bossing" column because, as we previously mentioned, generally people, and the less the taleted ones, do not like being bossed.

## 2. What Makes An Employee A High-Flyer?

According to Troy Jensen of Kaisen Consulting, "high flyers are those who reach a senior management position in a relatively short period of time - are more broad thinking, challenging of norms, open to do things in new ways and more capable of understanding themselves and their colleagues emotions, than their senior management peers".

Martin Galphin and James Skinner were found high flyers in their book *Helping high flyers fly high: their motives and developmental preferences*:

- „to have a particularly strong desire to be in a position of authority and control
- to be mainly concern about working to the best of their ability
- to make efforts to master new skills

- to be more motivated by competition with themselves than by competition with others
- not to be more motivated by the desire for material and financial rewards than the general population
- to found mentoring as the most useful development tool”

What the most HR managers claim is consistency, treating everyone the same, without discrimination. What we have just pointed out is that the employees are not the same, there are high flyers in a company who can not be treat as other employees are; so, maybe the consistency is not the best approach. It is more likely the high flyers to leave the company if they are treat as ordinary employees are. A company cannot afford to lose the high flyers because they are one of the most valuable resource. A company must find a way to develop them even further so that everybody to benefit: the high flyers, the team and the whole organisation.

The managers want the best results from their employees and they often directly supervise them, tell them constantly what to do and how to do their work. This is not a good approach for the common employees and the less for high flyers.

### **3. Ways Managers can Implement to Stop Bossing People Around at Work**

The best results from the high flyers means, beside other things, to stop bossing them around. The high flyers cannot follow step-by-step directions and wait for approval at every turn. They want to move fast, discover, and create — not be treated like children. They are more efficient in a decentralized and dynamic structure rather than a static and top-down one, a structure where the principles of bosslessness are followed. Bosslessness does not mean no management; the managers, the hierarchy, the management methods still exist in these structures, but their managers have a collaborative behavior. Bosslessness principles really want to connect people with the intrinsic motivation at work. Regarding this issue, the following aspects are essential:

- The power of self-manage - each employee is responsible to manage himself; he is his own boss and he must decide and take responsibility for his own actions. It is about freedom of thinking and action, but of course, at first it is about teaching people and building a trust atmosphere where people can be creative.
- The power of information - the employees must have the information so that they to be able to decide and act. If they have the necessary knowledge, no one have to tell them all the time what to do and how to do their work. They need both, inside information, related to their and their colleagues' work and outside information, related to the customers, the marketplace. It is easier to provide people with information instead of telling them constantly what to do both for the manager and for the employee.
- The power of network - every employee talks to anyone in a structure; based on bosslessness principles people are different, they think, decide, act differently, but they are connected and often these connections channels are sources of motivation, support and information.

If a manager finds his behavior under the “Bossing” column in the table previously presented (Table no. 1) and if he wants to perform at the same time, then, according to Self-Awareness Consulting, he can try using the following ideas in order him to go beyond bossing people around:

- “Talk with your employees, ask them what they like doing and let them do it without your “help.”
- Create jobs that use people's interests and talents.
- Praise your employees regularly for their great work.
- Allow people to set their own goals and determine how they will achieve them and by when.

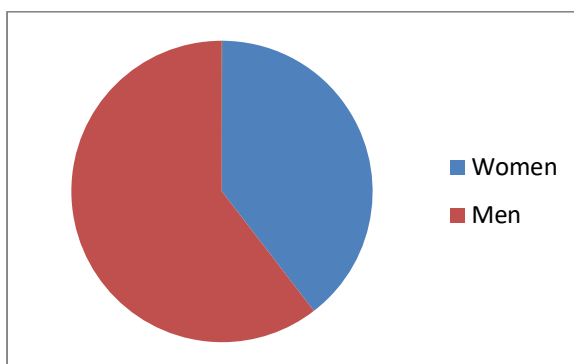


- Listen to your employees instead of talking over them.
- Trust that your employees can do their jobs and think independently without your supervision.
- Be available to provide support only if your employees ask you to do so.
- Start encouraging your employees to act independently instead of bossing them around.
- Provide opportunities for your employees to grow such as education or trying new things on the job.
- Move away from a strict hierarchy of bosses and employees and shift to a more collegial atmosphere”.

Following these ideas everybody will benefit from a happier workplace, free from the pressures of constantly directing. To boss less and manage more means also more time for thinking of the company's future.

#### 4. Research Methodology

The research is a descriptive one, of transversal type. In order to implement this quantitative research, the investigation was chosen as a research method. In this view, there was drawn up a questionnaire where we used the statements from Table no. 1. The statements were not arranged in columns, but they had a random order. The data base has in total 100 managers from Bihor county, 50 women and 50 men. 48 people completed the questionnaire, which means that response rate is 48%. From those 48 people, 19 are women and 29 are men.



**Figure 1:** Gender affiliation of the respondents

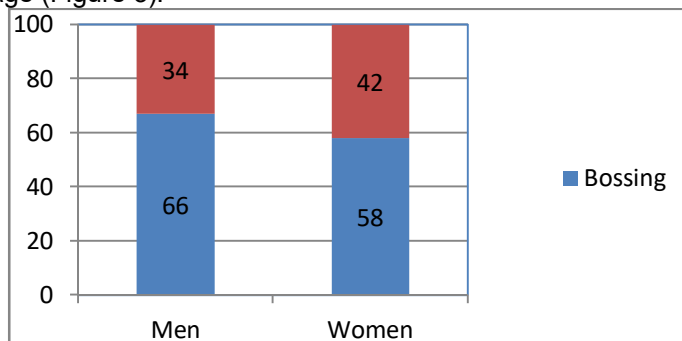
**Table 2:** The respondents' age

Respondents' age		
Age (years)	Number of persons	percent
18 – 24	5	10,4
25 – 34	18	37,5
35 – 44	14	29,1
45 – 54	9	18,8
55 – 64	2	04,2

Our objective was to find out whether the questioned managers are managing or bossing and also to find out whether gender or age influences the managers' behavior.

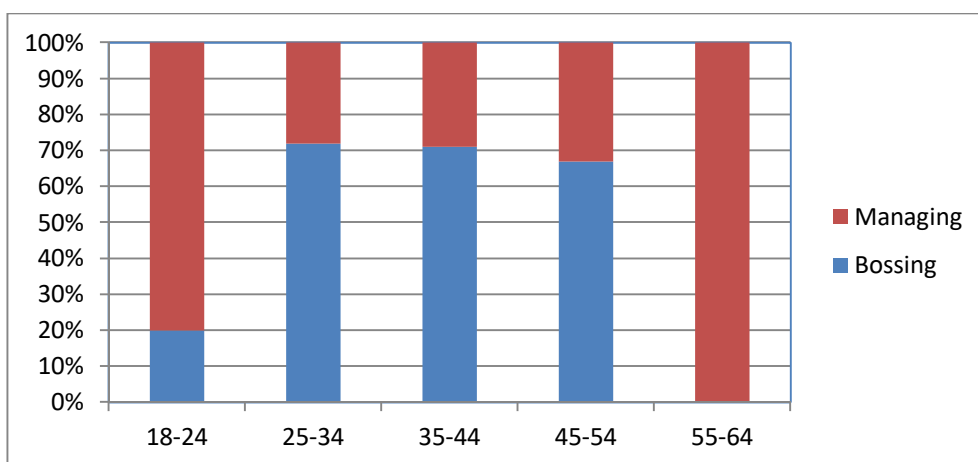
## 5. Results and Discussions

Our purpose was to find out how many out of 100 managers from Bihor county we questioned are managing and how many are bossing. We also wanted to find out whether gender or age influence the managers' behavior. The results of our research are presented in Figure 2 and 3. We analysed the respondents' behavior using 22 statements that led us to the conclusion that either they are managing, or bossing; we took into account gender (Figure 2) and age (Figure 3).



**Figure 2:** Managing or bossing -Gender

19 men and 11 women, from the respondents, that represent 62%, chose more than a half of the statements that are situated in the bossing column. 19 men represents 66% and 11 women represents 58%, so, our finding regarding the relation between managing/bossing and gender is that men are bossing more than women.



**Figure 3:** Managing or bossing -Age

1 person from 18-24 age group, 13 persons from 25-34 age group, 10 persons from 35-44 age group, 6 person from 45-54 age group and no person from 55-64 age group, that totalise 30 persons, are bossing more than managing. We notice that the middle-aged persons are bossing around people at work more than the younger or older ones.

As a large part of the respondents boss around their employees, we recommend them to use the ideas presented in the theoretical part of this paper in order him to go beyond bossing people around. In addition, they could take into account the following exhortations:

- Know the employees!
- Trust the employees!
- Empower the employees!

- Motivate the employees!
- Encourage the employees!
- Help the employees when it is necessary!
- Promote the employees when they deserve!

## 6. Conclusions

Our practical research findings can be summarized as:

- The managers are bossing more than managing
- Men are bossing around people at work more than women;
- The middle-aged managers are bossing around people at work more than the younger or older ones.

The companies must find the proper ways to manage the high flyers. The fact that the bossing principle is still used in many companies is not certainly the right way. According to Garner E., here are 7 ways that can be used to manage high flyers:

- „Develop them horizontally
- Aim for more moments of excellence
- Prepare them for the next step up
- Add quality to competence
- Spread the expertise
- Let them take more risks
- Put them at the leading edge”

In a rapidly changing world we need new ideas, new techniques and new business solutions almost every day that high flyers could bring in a company. These employees, totally competent in the present way of doing things could work at the leading edge of things using the skills of managing change. Consequently, the high flyers are one of the most valuable assets; the companies cannot afford to lose it. More than to retain, a company must develop them even further so that everybody will benefit: themselves, the team, and the whole organisation.

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## STUDENT SEGMENTATION FOR ONLINE DENTISTRY

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**Abstract:** *The students segmented into dental patient types is also relevant to digital marketing. Marketers or even practitioners in the field can develop more relevant digital communication skills the better they know the behavior of their customers. The present article aims at identifying students' dental target segment, using a segmentation method based upon the following criteria: demographic, psychographic and socio-economic features, preferred source of information related to dental care and the frequency of using different daily dental care procedures. Another goal was to assess and characterize the student-patients' buying behavior of the resulted target segments. In this study we have conducted a quantitative research that was based on a questionnaire, with 720 responses. The investigated population comprises students from the Central and North Western part of Romania. The findings display six segments of students as dental patients. "The well informed segment" are very concerned with health care and seek to be continuously informed. The students are active in sharing information and generate feed-back on different portals about their dental service experience. In spite of this, the Internet does not influence their decision in choosing a dentist. „The communication” segment consider that the dental social media promotions have an impact on them. They appreciate online tools such as: online scheduling, information related to the patients' own files, patients' testimonials, online consultations. The information regarding the practitioner arouse their interest and they consider it an important in decisional factor in choosing a certain procedure. "The online ignorant" are traditionalists and have an average interest in dental prevention, loyalty for their dentist or acquiring medium or complex procedures. Information that appears on forum, blogs, webpages or social media are not important to them. For „the beauty concerned” patients the Internet represents a means in converting the need or desire into action. The information regarding dental cosmetics like teeth whitening or dental jewelry have a big importance to them, followed by information related to implants and teeth straightening. They are not so loyal to a particular dentist and are extremely influenced by social media promotion campaigns. For "technical propensity" students, social media doesn't influence their decision in choosing a dental procedure, product or practitioner, but they are looking at testimonials on webpages or blogs about advanced dental services. The students from this segment would appreciate dental games on a practitioner's webpage, as long as it develops some strategic skills. A very interesting feature of this segment is the high loyalty if the practitioner's marketing strategy meet their technical (digital) expectation. "The sensitive of pain" segment are the most loyal patients. Those students are checking-up the information found on the Internet with their practitioners.*

**Keywords:** segmentation; dental care; students; online communication; Romania.

**JEL Classification:** M2; M3; M31; I10.

### 1. Introduction

The world around us is in a continuous change, which has a tremendous effect on any type of business, including the dental care service. Technologies are not the only ones who are evolving, but the requested and used techniques and procedures change, the used materials improve and so do customers' expectations regarding the desired services. Peter Drucker actually said that change is the only constant thing in today's business environment.

More so we can state that in this era, where Internet plays an important part in the survival of a business, practitioners who are possessing some marketing knowledge are spending time and money to be present in the online world in order to be successful and to meet their customers' requirements (Constantinescu-Dobra & Maier, 2016). Thus, dental practitioners feel obliged to create a web page for their business. They also try to make themselves known on the social media (Facebook, Twitter, etc.) or even subscribe to newsgroup discussions (Constantinescu-Dobra & Maier, 2016). According to Iancu et al. (2016) having a Facebook page can influence more than 43% of clients in choosing a certain dental practice.

We can thus conclude that in order to meet up with the expectations of their customers, dental care providers need to keep up with all the changes related to their procedures, techniques, technologies or their online presence.

## **2. Students and oral hygiene**

The subject of oral hygiene is a very delicate one for young people - adolescents and students. Dental care, at this age, needs an increased attention, as their surroundings are full of temptations. Factors such as an exaggerated consumption of sweets and other caries-producing foods and beverages, smoking and a low frequency of daily brushing, may have a big impact on their oral health. All the mentioned factors might lead to serious dental problems, later in their adult life. Thus, we can all agree that adolescence marks a significant period in everyone's life. It is the best moment in our lives, to develop sane habits and to start taking care of our general and oral health (Gil et al., 2015, Vettore et al., 2012). Therefore, it is extremely important, that researches addressing factors related to this outcome to also approach the subject of oral hygiene (Gil et al., 2015). In this respect, we have used, in our study, the self-reported tooth brushing frequency, to measure the oral hygiene of the Romanian students.

Poor oral hygiene in what regards the accumulation of plaque and tartar with increasing age has been reported among adolescents in both, developing and developed countries (Saied-Moallemi et al., 2009, WHO, 2003). It has been stated that, the social and the economic status have a significant impact on health- and health behaviors (Locker, 2000, Peterson, 2005). Further on, Locker underlines the fact, according to which, the lower the material standard of living is (measured by income, social class and social network and support), the worse the level of oral health is. Results remain unchanged, whether the methods used to measure these outcomes were clinical or only self-reported oral health indicators (Locker, 2000). In Romania the economic crisis has also changed the patient behavior. The patients are now paying much more attention to the efficiency of the money they spend on dental services (Medipedia, 2011).

The existing studies concerning oral health care note the following trends for the year 2020 (Achermann, 2012):

- Patients will require more and better information on dental health and treatment options
- The number of dental patients with co-morbidities will increase
- The customer base will be more diverse
- The number of dentists placing implants will decrease
- Prosthetics will determine treatment
- Digitalization will change the workflow and the value chain
- Innovation is going to expand the patient pool
- Brand and differentiation will be essential in maturing markets
- Competition for talents will increase
- The dental implant market growth will correlate with the consumers' behavior and macroeconomic environment

- Economic pressure in developed countries is going to foster a “good-enough” mentality among patients and dentists

### 3. Segmentation of dental service patients

In order to be able to understand the expectations and behavior of customers or potential customers it is of high importance to try and classify them. This classifications will help the product or, in our case, the service provider to address every customer group in the best manner possible.

Imtiaz Manji (2012) identifies five types of patients that he classifies, as follows:

- Event-Driven patients are those who go to the dentist only when it absolutely necessary. That means that they are going in for treatment only if they suffer a trauma, if they are in pain or if they broke a tooth. They have a “must fix it” mindset, for an emergency they have probably helped in creating through neglect.
- Reactive patients are those who recognize the necessity for a regular hygiene and a regular dental check-up, but despite all of these they still have a mindset of “I know I should, but...”
- Proactive patients are those who keep their appointments and take their oral health and hygiene seriously. Still their major concern is related to cost and they concentrate too much on insurance and other economic factors. This patients have a “help me prioritize” mindset.
- Discretionary patients are those who are not only looking for general dental care but are ready to invest in esthetic/ cosmetic treatments. Often these patients have been influenced either by a friend's treatment, a beauty show they saw, a TV commercial or an upcoming important event and have an “I want to look/feel better” mindset.
- Regenerative patients are every dentist's dream patients because they are looking for the best care and they are willing to invest in getting the best services and making/keeping their oral health and hygiene as good as possible. They are those patients, which are driven by “It's worth the investment” mindset.

After acknowledging Imtiaz Manji's classification we directed our focus on analyzing the different types of students as dental patients. A reason to decide upon this were the findings (Becker at all, 1997, Baldwin, Sohal, 2003, Chandler, Weller, 2004) according to which dental marketing is continuously evolving. Thereby, along with the trends towards globalization, networking, mass customization, and digitization, companies must align their practice to the new trends. The students represent the segment, which is most active on the Internet. Hence we intend to investigate their behavior related to the health care practices and how the Internet influences their buying behavior for dental services.

## 4. Research Methodology

### 4.1. Research objective

The objectives of the research are as follows:

a) Identifying students' dental target segment using a segmentation method based upon the following criteria:

- Demographical and socio-economic features
- Preferred source of information related to dental care
- The frequency of using different daily dental care procedures
- Their personality

b) Assessing and characterizing the student-patients buying behavior of the resulted target segments.

### 4.2. Research instrument and sample description

In this study we have conducted a quantitative research that was based on a questionnaire administered to a sample of students using a web based approach.

The questionnaire contains open as well as closed questions, comprising 39 items, grouped in 4 sections: behavioral section (Likert scale), the typology of the accessed information regarding dentistry (Importance Scale), expectation of patients (Importance Scale) and identification questions (demographic, personality and daily dental care procedures).

As a sampling method we have chosen the *simple sampling method*.

The investigated population comprises students from the Central and North Western part of Romania. We have chosen this region for our study as the indicator of economic growth (and power/inhabitant) is the closest to the country's average here.

#### *The sample size*

To find out the size of the sample, we used the following formula:

$$a) \quad n = t^2 \times p \times \frac{1-p}{e^2}, \text{ where:}$$

$n$  = sample size;

$t$  = probability allowed (1.96 was chosen for a confidence level of 95 %);

$p$  = 0.5(usually);

$e$  = accepted limit of representativeness error (accepted between 1 % and 5% maximum);

$e$  = 4 %.

The computed sample size is:

$$n = 1.96 \times 0.5 \times \frac{1 - 0.5}{0.05^2} = 3.8416 \times 0.5 \times \left(\frac{0.5}{0.002209}\right)$$

$$n = 434.76$$

Moreover, we corrected the sample size using the following formula:

$$b) \quad n_1 = n / \left[1 + \frac{n-1}{N}\right], \text{ where}$$

$n_1$  = corrected sample size;

$n$  = sample size;

$N$  = the total population.

Therefore, after applying the correction formula we received the following result:

$$n = \frac{434.76}{\left[1 + \frac{434.76 - 1}{450000}\right]} = \frac{434.76}{1.00096391} = 434.341334$$

According to statistics there were 450,000 students in Romania between the years 2014-2015 (insse.ro)

Our sample includes 720 respondents. Also to mention here is that our survey was conducted during the period of April- November 2016.

According to the identification questions, we have 55% female and 45% male respondents. Furthermore, the majority of students in the sample are studying at the Technical University of Cluj-Napoca (38%), the Babes-Bolyai University (36%) and Iuliu Hatieganu University of Medicine and Pharmacy (21). A percentage of 27% of the interviewed students are from the rural area and 73% from the urban area. The great majority of respondents (88.5%) are between 21 and 22 years old, whereby 82.6% are in their 3<sup>rd</sup> year of study and 21% of them are employed.

The respondents' disposable income is as follows:

- under 300 lei/month (111 EUR) – 13%
- between 300-500 lei/month (50-111 EUR) - 23%
- between 500-1000 lei/month (111-222 EUR) - 36%
- between 1000-1800 lei/month – 22%
- more than 1800 lei/month - 6%

What the prevention concerns 16.6% are brushing their teeth once a day, 63.1% twice a day, 12% three times a day and the rest are brushing their teeth just occasionally. Thus we consider these percentages as not being as representative, regarding the awareness of the

importance of oral hygiene, as all of the respondents are students, a segment that has access to a higher education and that is better aware of the importance of prevention.

#### 4.3. Methodology

Through segmentation, the dental practitioners can identify niches with specific needs and can deliver more appropriate and effective promotion messages. We intend to segment the students in order to analyze if the internet communication has an influence in the process of deciding for and remaining loyal to a dental health care provider.

In the field of dentistry, such as in the case of the majority of products or services for persons, demographical features are the most common criteria to implement. It is equally known that they are not so effective for a successfully marketing strategy on a mature market. Given this situation, the segmentation based on behavioral features such as the usage of the product or their attitudes towards it and the needs they're trying to satisfy. Other studies (Destro et al, 2013) recommend for dental patients segmentation taking into account demographic features (e.g. Age, gender, life cycle, income level) and psychographic criteria such as lifestyle- innovators, end-users who show keen interest in dental health, interested in sports and wealth.

Beside the above, we have chosen also some criteria related to the specific dental services they intend to access. Hence we have chosen the following packages of dental services:

- Basic dental services: including resolving cavity problems
- Cosmetic dental services: professional cleaning, whitening, services against dental plaque
- Advanced services: implants, prosthetics, dental repairing, paradonthosis etc.

#### 4.4. Research and result discussions

We have analized the obtained studentsegments by using the criteria described in table 3.

**Table 1:** The segmentation criteria

Item	Number of Categories	Descriptions
Gender	2	Male, female
Age	4	18-20,20-22,22-24,>25
Income level	4	300-500,500-1000,1000-1800,>1800
Psihographic features	4	Informed, interested in wealth/health, interested in layout,intrested in digital communication
The frecvency of visiting the dental practitioner	3	Low, medium, high
Buyer of packages of dental sevicees	3	Basic dental services, Cosmetic dental services, advanced services
TOTAL	20	

Source: computed from the questionnaire

After computing all the above criteria, we have obtained 40 criteria.

Although, we have clustered some segments taking into account the same behavior regarding the dental services and we have eliminated the very small (insignificant as numbers of persons) segments.

Furthermore, for the remaining clusters, we have continued to investigate the most preferred source of information related to dental services. The most homogenous and relevant segments of student-patients are described in the following. The research findings indicate



a number of six different segments of students as dental patients, having same characteristics inside, but with differentiation between them.

#### **4.4.1. The well informed patients** (76 students in the sample)

This segment is very preoccupied with its health and seek to be continuously informed. The students in this segment are mostly female (59%) and are checking their oral health state at least once a year. A percentage of 29% of them are going to the dentist at least two times a year. Concerning the prevention, they are brushing their teeth at least three times a day (71%) and are using tooth paste, dental floss as well as mouth water.

A percentage of 58% of the questioned students are loyal to their dental practitioners, even though they are continuously looking for new information.

For this segment, the age is not relevant and their income tend to be in the medium range or higher.

The preferred channel of information are the Internet portals, followed by recommendation of their primary reference group. The students of this segment are finding out information related to oral hygiene and dental procedures on webpages, social media and forums/ blogs. Moreover the students are active in sharing information and generate feed-back on different portals about their dental service experience. In spite of this, the Internet does not influence their decision in choosing a dentist. The searched information available on the Internet concerning the dental services is related to dental cosmetics, prices dental services, procedures, comparisons between different treatment methods, advantages of the used materials, as well as information related to prevention or implants.

#### **4.4.2. The “communication” patients** (56 students in the sample)

This segment is formed by students that are very passionate with digital communication. They love to socialize generally and „digitally”, by spending at least 5 hours a day connected with others on the Internet.

They are not very active dental patients and the majority of them choose to visit their practitioners only if there is an emergency (52%). Some of them do not pay so much attention to dental prevention (18%). Only 31% of them are brushing their teeth regularly (twice a day) and are not going to the dentist for a tartar removal. Despite all of these, they are in a great majority (64%) relatively well self-documented related to cosmetic procedures.

Most of them are in the 1<sup>st</sup> or 2<sup>nd</sup> year of faculty and they state that dental social media promotions have an impact on them. Moreover, they appreciate the practitioners that use online tools such as: online scheduling, information related to the patient's own files, patients' testimonials, information regarding health insurance, online consultations and news on the dental field. This was the only segment that declared that *information regarding the practitioner (personal information, CV) arouse their interest and it represents an important decisional factor in opting for a certain procedure*. The students from this segment are both female and male, with low and medium disposable income, especially from urban area (74%). They also generate feedback on social media concerning even the dentist's attitude, skills and procedures, especially in communicating with their friends.

#### **4.4.3. The online ignorant patients** (52 students in the sample)

These students are not interested at all in seeking information about dentistry on the Internet. They are traditionalists and have an average interest in all actions concerning dental prevention, loyalty to their dentist or acquiring medium or complex procedures. They declare that information posted on forums, blogs, webpages or social media are not important to them. Half of them are going to a dentists every two years and their disposable income is low and medium.

#### **4.4.4. The beauty concerned patients** (48 students in the sample)

The findings reveal that the Internet represent a medium-important platform in seeking dental information and assessing the patients' alternatives. For this segment, we have to mention a very specific result: *the Internet represent a means in converting the need or desire into action*. The information regarding dental cosmetics like teeth whitening or dental jewelry has a big importance for them, followed by informations related to implants and teeth straightening.

This segment is formed mainly of females (64%), with medium and high income, particularly from urban area. They do not respect entirely the annual dental checking rules, but are using in a great majority (61%) the upper-medium products in order to care for their teeth. This segment does not seek for information on forums and do not read, or take into account any recommendations that are posted on blogs.

They are not so loyal to a particular dentist (only 18%) and *are very influenced by the social media promotion campaign*. The promise of the campaign should be rather emotional than rational and the practitioner's experience in cosmetic procedure does not count. The segment is formed mainly by students from the Faculty of Economics and Business Administration (62%).

#### **4.4.5. The technical propensity patients** (32 students in the sample)

This students are describing themselves as being innovative and tilt to technical features. They seem to like the communication as patients in terms of appreciated features of digital communication in the dental field. They would appreciate having the possibility of online accessing their dental folder, containing every procedure they have performed over time. Also, they like the possibility to access the dental schedule and find themselves a free spot in the dentist programmer. We note although that the majority of them access dental information about dentistry once a year (59%). *Social media doesn't influence their decision in choosing a dental procedure*, product or practitioner, but *they are looking at testimonials* on webpages or blogs about advanced dental services. The students in this segment would *appreciate dental games* on the practitioner's webpage, as long as it develops some of their strategic skills. The Internet promotion on webpages are not efficient for this target, but the browsed information are concerning details about procedures or used materials with a very high degree of complexity and the comparative-argumentative reasoning is preferred. The majority of the respondents in this group are from urban areas, in 3<sup>rd</sup> or 4<sup>th</sup> year of study, are students at the Technical University (78%) and mainly males (82%).

A very interesting feature of this segment *is high loyalty* if the practitioner's marketing strategy meets their technical (digital) expectation.

#### **4.4.6. The sensitive of pain** (24 students in the sample)

This dental segment of students are *the most loyal patients*. Nevertheless, they are not going to the dentist for a regular check-up, but only when it is absolutely necessary, mainly because of the fear. They are brushing their teeth at least twice a day - 74% and are better aware of the importance of prevention. This is the reason why they like to find on a dental websites educational articles or documents about oral health care education. For this patients, the procedures applied in order to reduce de pain is very important to be described on the social media sites or on the websites. Furthermore, the testimonials of other people that are sensitive to pain are crucial in arising their interest. *The particularity of this segment consists in the fact that these students are checking-up the information found on the Internet with their practitioners*.

The students in this segment use additional mouth care products like the mouth water 47% and are not interested in cosmetic dentistry (just in a very small degree-8%). Also, this students appreciate information available on the Internet concerning dental hygiene and cavities. They are balanced in gender, income and age.

## **5. Conclusions**

As an overall conclusion we can state that our proposed segmentation focuses on commercial effectiveness, selecting the most valuable segments for a business and then developing a customized communication with each category of dental patients.

Given the growing competition in the fields of dentistry along with the young patient's propensity for online information, the resulted segments are important in order to set an appropriate marketing strategy. The findings display that the most relevant segment for the students as dental patients are as follows:

- The "communication" patients
- The online ignorant patients
- The beauty concerned patients
- The technical propensity patients
- The sensitive of pain

Just as Imtiaz Manji classified the types of dental service patients we also made a classification of the characteristics shown by our analyzed students and came across some similarities. For example our sensitive to pain students group have same characteristics as the event-driven patients, our beauty concerned patients are same as the discretionary patients and our well informed patient presents similar characteristics to the proactive patient.

What is thus important for us to keep in mind is, that the prioritization of dental services for each segment are not the same, so the marketing messages should be designed for each segment to emphasize relevant benefits and features required rather than one single communication for all patients types. This approach is more efficient, delivering the right mix to the same group of people, rather than a general approach.

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# AN EMPIRICAL STUDY ON THE RELATIONSHIP BETWEEN EMPLOYEE MOTIVATION AND LEADERSHIP STYLE CONDUCTED ACROSS INDUSTRIAL COMPANIES IN NORTH-WESTERN REGION OF ROMANIA

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**Abstract:** *In an era of global competition and growing diversity of the workforce, the ability to shape the organizational culture, communicate goals and motivate employees is critical to business success. Starting from this assertion, this study presents some of the outcomes of a research study designed to develop a model for analyzing and evaluating the degree of involvement and satisfaction of employees in non-executive positions within the quality management systems of organizations operating in the steel construction industry from the north-western region of Romania. The specific objectives of this study cover the analysis of the "employee motivation" and the "leadership style" variables; the analysis of the relationship between and the influence of the "leadership style" variable on the "employee motivation" variable. The research method applied in the survey was the quantitative research method, i.e. the questionnaire-based survey. The surveyed sample was composed of organizations operating in the steel construction industry, located in northwestern Romania. The research was based on a guided sample of 23 companies active in the industry mentioned and on interviewing a total of 388 non-executive employees from the companies surveyed. For the purpose of the survey, a total of 500 questionnaires were distributed, of which 388 were collected and validated, which accounts for a response rate of 77.6%. This study comprises two main parts: in the first part, we describe in brief the definitions of the concept of leadership, as we have identified them in the specialized literature reviewed. In the second part, we describe our research methodology, the main results obtained and the conclusions drawn. As a primary conclusion, we have found that the two variables studied show relatively high average values, which indicates that there are some problems in the motivational practices applied by the organizations surveyed. We are also confirming the hypotheses tested in the analysis presented in this study.*

**Keywords:** *Employee motivation; leadership style; democratic leadership style; industrial firms; empirical study.*

**JEL Classification:** *M1; M14.*

## 1. Introduction

According to Daft (2008: 454), leadership is the use of influence by managers to motivate employees to achieve organizational goals. Leading means creating shared culture and values, communicating goals to the employees throughout the organization and "infusing" the employees with desire to perform at a high level. Leadership involves motivating entire departments and divisions, as well as those individuals that are directly reporting to top managers.

Chuck (2011: 493) believes that leadership involves inspiring and motivating employees to work hard to achieve organizational goals. Leading is the process of arousing people's enthusiasm and inspiring their efforts to work and fulfill the plans and accomplish the objectives of their organization. Schermerhorn (2012: 259) states that managers build commitment to organizational goals and plans and influence others to do their best work on the organization's behalf. Leading is the process of influencing others to achieve organizational goals. This implies motivating, interacting and communicating with subordinates in ways that recognize and support their efforts to accomplish tasks and achieve

organizational objectives. A critical function of the leaders is to motivate employees so that they become as productive as possible. To do that, leaders should use all the tools available to them to create individualized rewards in relation with employees' performance. In the current organizational environment many leaders focus on the work of their teams and, as such, they need to find ways to guide the teams while simultaneously motivating the team members, i.e. the individuals who make up the teams, empowering equally the team as a whole and each of the team members. Therefore, leading involves responsibility and a huge challenge (Hitt, et al., 2012: 239).

Leadership may be defined as the process of guiding the work of the members of the organization in the right directions. The right direction is any direction that helps the organization "move" towards achieving its objectives. The role of the leader is to influence employees to increase productivity. Relationship-oriented leaders (subordinate-oriented) usually generate higher levels of productivity than the leaders oriented on tasks and on the technicalities of the work of the employees (Certo & Certo, 2012: 96).

DuBrin (2012: 345) argues that leading is influencing others to achieve the organization's goals and involves energizing, guiding and persuading. Leadership involves a lot of interpersonal processes: motivation, communication, coaching and the ability to show others what to do to achieve their objectives. Leading is an essential function and is the function based on which leadership is defined as the process of "achieving results through others."

We may therefore conclude, based on the summary review of the approaches above, that leadership is a function of the management that relates to those people and members of the organization, who need to carry out their work as efficiently and effectively as possible for their organization to achieve its goals.

## 2. Research Methodology

This study presents some of the results obtained by our survey, whose purpose was to establish a model for analyzing and evaluating the degree of involvement and satisfaction of non-executive employees within the quality management system of the organizations operating in the steel construction industry from the north-western region of Romania.

The specific objectives of this study are:

- analysis of the "*employee motivation*" variable;
- analysis of the "*democratic leadership style*" variable (the study deals exclusively with the democratic leadership style; therefore, for convenience purposes, we will use the shortened name of this variable, namely "*leadership style*");
- analysis of the correlation between the "*employee motivation*" variable and the "*leadership style*" variable;
- analysis of the extent to which the "*leadership style*" variable influences the "*employee motivation*" variable.

The survey sample consisted of organizations operating in the steel structure industry from the north-western region of Romania. The research methodology applied in this study is the quantitative research method, i.e. a questionnaire-based survey. The questionnaire consisted of 112 items describing the factors considered important for the research and for the analysis and evaluation of employees' involvement and satisfaction within the quality management system. To assess these factors, we have resorted to a set of several simple questions defined on a Likert -scale from 1-5 where 1 = strongly disagree; 2 = disagree; 3 = undecided; 4 = agree; 5 = strongly agree. The survey was conducted based on a guided sample of 23 companies from the industry mentioned above and on interviewing a total of 388 non-executive employees from the companies surveyed. For the purpose of the survey, a total of 500 questionnaires were disseminated, of which 388 were collected and validated, which represents a response rate of 77.6%.

The analysis described in this study was conducted in two stages:

- 1) The analysis of the variables "*employee motivation*" and "*leadership style*":

- “*employee motivation*” is an aggregate variable consisting of 13 items that relate to the identification of the degree to which the surveyed employees are motivated (willing) to perform their tasks and to engage in the business of the company.
  - “*leadership style*” is an aggregate variable consisting of 10 items and describing the characteristics of a democratic leadership style practiced by the managers of the surveyed employees.
- 2) The testing of the following hypotheses:
- *H1*: there is a strong and positive correlation between the variables “*employee motivation*” and “*leadership style*”.
  - *H2*: the variance of the “*employee motivation*” variable is largely explained by the variance of the “*leadership style*” variable.

### 3. Results

#### 3.1. Stage 1: analysis of the variables “*employee motivation*” and “*leadership style*”

We begin our presentation of the survey outcomes by analyzing the variable “*employee motivation*”. Mention should be made that, before discussing the values recorded by this variable, we find it important to show whether the items composing the variable are well designed, namely whether they are relevant for describing the attributes of the variable and in particular whether they provide an adequate level of internal consistency to the variable under consideration. The variables analyzed show internal consistency only when the items that make up their structure are relevant, i.e. when they show a strong and positive correlation both with the other items and with the overall score of the variable as such. In this respect, we will analyze the internal consistency of the variable studied, using the Cronbach’s alpha coefficient of internal consistency (reliability), which, in this case, is as high as 0.940, indicating a high degree of internal consistency (Cronbach’s alpha may have values ranging between 0 and 1, meaning that, the closer to 1 the value of this indicator tends to be, the higher the internal consistency of the variable studied; the minimum value indicating a good internal consistency is 0.7).

Now, we can proceed with discussing the mean value recorded by this variable. Table 1 shows that the variable “*employee motivation*” has recorded an average value of 3.5, indicating a relatively high level of motivation and commitment among the employees surveyed. An average value close to 5 indicates the highest level of motivation and involvement of employees, while an average value close to 1 indicates a very low level of motivation and involvement. Therefore, the average value (3.5) obtained in our survey, which is the closest to the theoretical average (3), indicates that there are problems with the motivational practices used within the organizations surveyed and that their management teams should strive to improve this dimension.

**Table 1:** Descriptive statistics for the variable “*employee motivation*”

	N	Mean	Std. Deviation
Employee motivation	388	3.50	.387
Valid N (listwise)	388		

Source: Own research

Regarding the “*leadership style*” variable, the Cronbach’s alpha coefficient of internal consistency stands at 0.951 in our survey, which reflects a very good internal consistency of this variable. We may now interpret the average value of the variable analyzed: as one can see in Table 2, the “*leadership style*” variable has scored an average value of 4.03, which is a value very close to the maximum value, indicating that the leaders of the

respondent-employees are practicing a democratic rather than an authoritarian leadership style.

**Table 2:** Descriptive statistics for the variable “*leadership style*”

	N	Mean	Std. Deviation
Leadership style	388	4.03	.708
Valid N (listwise)	388		

Source: Own research

### 3.2. Stage 2: Testing the Survey Hypotheses

As for the first hypothesis, according to which we try to see whether there is a strong and positive correlation between the variables “*employee motivation*” and “*leadership style*”, what we basically do is ask ourselves whether there is an association or a correlation between these two variables or, in other words, whether there is a linear correlation between them.

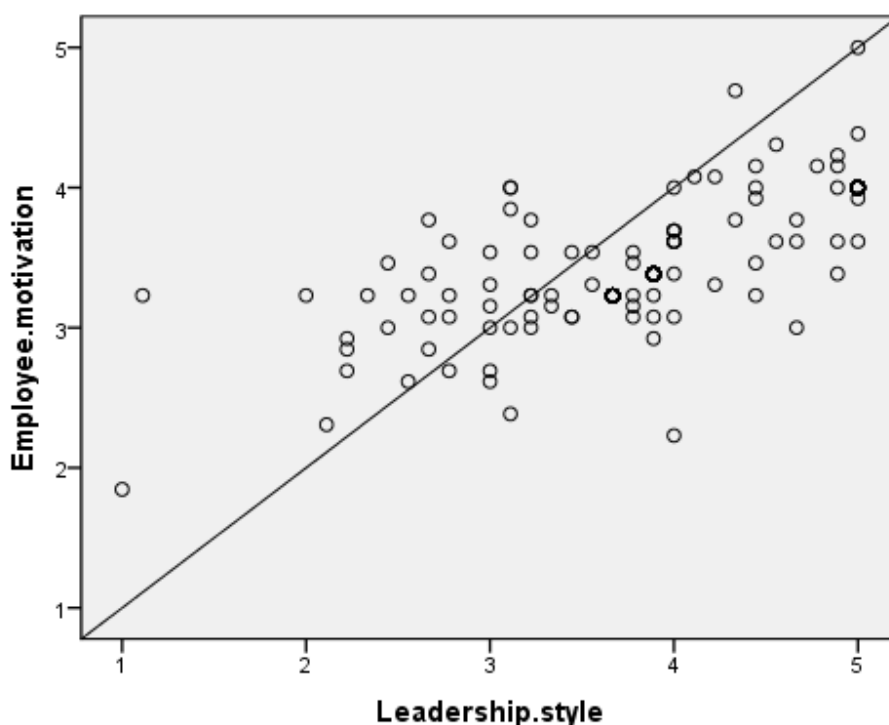
Once we have decided that there are linear relationships (correlations) between the two variables, we need to find out how strong these correlations are and how they manifest themselves; that is to say we have to identify the extent to which one variable is dependent on the other variable.

To this end, we have analyzed the presence of correlations between the variables under consideration, using the Pearson’s correlation coefficient, as shown in Table 3.

The Pearson’s correlation coefficient is a measure of the strength of the correlation between two variables (how strong the correlation between two variables is). Person’s correlation coefficient may have a value between +1 and -1, meaning that the closer the correlation between two variables is to -1 (total negative linear correlation) or to 1 (total positive linear correlation), the stronger the correlation between the two variables considered. However, one should bear in mind that a negative value does not mean that there is no correlation whatsoever between the variables studied, but quite the contrary: the closer to -1 the value, the stronger the correlation, yet in a negative sense; in other words, the higher the values of one of the variable, the lower the values of the other variable; more specifically, a positive correlation means that, as the values of either of the variables increase, the values of the other variable increase (improve) as well.

Figure 1 illustrates the point cloud describing the linear and positive correlation between the two variables analyzed.





**Figure 1:** The relationship between the variables “*employee motivation*” and “*leadership style*”

Source: Own research

A look at Table 3 shows that there is a very strong and positive correlation between the variables “*employee motivation*” and “*leadership style*”, namely  $r_{\text{Pearson}} = 0.824$ ,  $p < 0.01$ , which means that, as the leadership style adopted by the leaders of the organizations surveyed gets more democratic, the degree of employees’ motivation increases (a strong and positive correlation means that, as the values of any of the two variables increase, the values of the other variable will increase as well).

**Table 3: Correlations**

		Employee.motivation	Leadership.style
Employee.motivation	Pearson Correlation	1	.824**
	Sig. (2-tailed)		.000
	N	388	388
Leadership.style	Pearson Correlation	.824**	1
	Sig. (2-tailed)	.000	
	N	388	388

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Own research

This result of our survey comes to confirm the assumptions made by the specialized literature, namely that a democratic leadership style, oriented on involving and persuading

the subordinates (decision is marketed to, not forced on the subordinates) triggers a higher degree of commitment, involvement and motivation among subordinates in an organization. However, while this result is not applicable to all types of organizational environments (but only to the surveyed sample), it confirms the assumptions in the specialized literature, dealing with circumstantial leadership style, according to which leadership style should be adapted to the circumstances in which a leader is expected to lead (for example, when the leader is faced with a high organizational maturity among its subordinates, meaning that subordinates know how and are capable and willing to do their job, then, to be effective, the leader should adopt a democratic rather than an authoritarian leadership style, which is the case of the sample we have surveyed).

Based on the results described above, we can say that *hypothesis H1* according to which there is a strong and positive correlation between the variables “*employee motivation*” and “*leadership style*” is confirmed.

As we have shown above, the factor-variable “*employee motivation*” improves when the values of the variable “*leadership style*” increase (improve). Yet we could not know exactly the extent to which the variance in the “*leadership style*” variable would influence the variance of the “*employee motivation*” variable; more exactly, we could not tell for sure the extent to which the variance of the “*employee motivation*” variable would change in the case of a change by a percentage point in the variance of the “*leadership style*” variance. Consequently, we proceeded with testing the second hypothesis formulated in this survey, according to which the variance of the “*employee motivation*” variable is largely explained by the variance of the “*leadership style*” variable.

In this regard, we applied a regression model, which we will describe below. In Table 4 one can see a first set of information about the effectiveness of the regression model we applied, namely the adjusted value of the coefficient  $R^2 = 0.678$ , which indicates that the “*leadership style*” variable influences in a proportion of 67.8% the “*employee motivation*” variable. In other words, we can say that 67.8% of the variance in the “*employee motivation*” variable may be explained by the variance in the “*leadership style*” variable.

**Table 4: Model Summary**

Model	R		R Square	Adjusted R Square	Std. Error of the Estimate
1	.824 <sup>a</sup>		.679	.678	.220

a. Predictors: (Constant), Leadership.style

Source: Own research

We will describe further the regression model we applied in our survey. Thus, Table 5 shows that the value of the F-test, which checks whether the regression line is significantly different from zero, where  $F(1, 386) = 816.032$ ,  $p < 0.001$ ; it follows that the F-test is statistically significant, meaning that a high value of the F test indicates that the variable “*leadership style*” is relevant in explaining the variance of the variable “*employee motivation*”.

**Table 5: ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	39.409	1	39.409	816.032	.000 <sup>b</sup>
	Residual	18.641	386	.048		
	Total	58.050	387			

a. Dependent Variable: Employee.motivation

b. Predictors: (Constant), Leadership.style

Source: Own research

**Table 6: Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.683	.065		26.033	.000
Leadership.style	.451	.016	.824	28.566	.000

a. Dependent Variable: Employee.motivation

Source: Own research

In Table 6, one can notice that the constant is  $p < 0.001$ , which indicates that the constant is relevant in the model. We can therefore predict the variance of the “*employee motivation*” variable in relation to the “*leadership style*” variable. Thus, if we make predictions based on the standardized Beta coefficient, we find that when the “*leadership style*” variable improves by a standard deviation, the “*employee motivation*” variable improves by 0.824 standard deviations. If we make predictions on the basis of non-standard coefficients, then the sign of the non-standardized coefficient B signifies that there is a direct correlation between the two variables; therefore, in this particular case, the prediction can be written in the following form: a change by one point in the “*leadership style*” variable causes a change by 0.451 points in the “*employee motivation*” variable, indicating a great interdependence between these two variables. As such, the management of the surveyed organizations should pay attention to improving these dimensions.

Consequently, *hypothesis H2*, according to which the variance of the “*employee motivation*” variable is largely explained by the variance of the “*leadership style*” variable is confirmed.

#### 4. Conclusion

This study describes some of the results obtained from a research that aimed at developing a model for analyzing and evaluating the degree of involvement and satisfaction of non-executive employees within the quality management system of organizations operating in the steel construction industry from the north-western region of Romania.

The specific objectives of this study were: analyzing the “*employee motivation*” variable; analyzing the “*leadership style*” variable; analyzing the relationship between the “*employee motivation*” and the “*leadership style*” variables; analyzing the influence of the “*leadership style*” variable on the “*employee motivation*” variable.

The research sample was made up of organizations operating in the steel constructions industry from northwestern Romania. The research method we have applied in the survey is the quantitative research method, i.e. a questionnaire-based survey.

The analysis described by this study was conducted in two stages, namely, the analysis of the variables “*employee motivation*” and “*leadership style*” and the testing of the survey hypothesis.

A brief conclusion of our survey is that the two variables show relatively large average values, with the “*employee motivation*” variable recording a somewhat lower average value of 3.5, compared to the “*leadership style*” variable, which scores a higher average value (4.03), indicating that there are some problems with the motivation practices applied by the surveyed organizations, namely the application of a democratic rather than an authoritarian style of leadership.

The two hypotheses tested under this survey, namely H1, according to which there is a strong and positive correlation between the variables “*employee motivation*” and “*leadership style*”, and H2, according to which the variance of the “*employee motivation*” variable is explained to a large extent by the variance of the “*leadership style*” variable are confirmed.

We have succeeded to identify that 67.8% of the variance of the “*employee motivation*” variable can be explained by the variance of the “*leadership style*” variable.

We have also managed to make predictions using a regression model by which we acknowledged the fact that when the “*leadership style*” variable improves by a standard deviation, the “*employee motivation*” variable improves by 0.824 standard deviations, which indicates a great interdependence between these two variables. As such, the leaderships of the organizations surveyed should pay a higher attention to improving these dimensions.

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# THEORETICAL APPROACH OF THE MEASURE OF THE PSYCHOLOGICAL CONTRACT OF EMPLOYEES

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**Abstract:** *The psychological contract (PC), defined as the set of promises that play the role of obligation between the employee and his organization (Rousseau, 1989), represents for the last twenty-five years an almost unavoidable instrument for analyzing the employment relationship. Several studies have demonstrated an undoubtedly link between the psychological contract fulfilment and several behaviors and attitudes at work such as organizational commitment, performance and the intention to stay with the same employer. However, certain methods have been developed over time to measure the psychological contract but they have not been used all the time and in the same way by all researchers. For example, if the analysis of the breach and PC violation marked the beginning of the PC research, its content or its facets began to be used later. As international researches and our own research show, it is only by putting together, in a complementary way, the methods of measurement of PC that one can apprehend the face of the PC of the employees in a certain company or country. In the literature, there are three possible ways to propose measures of the psychological contract (McLean Parks et al., 1998, Rousseau and McLean Parks, 1993, Rousseau and Tijoriwala, 1998). A first approach is the apprehension of its content, while the second deals with its facets, also called characteristics. This second approach measures the nature of the psychological contract. Based on these two elements, a typology of the psychological contract was proposed (Rousseau, 1995, De Vos, 2002). The third approach proposes the measurement of the psychological contract in relation to its realization (its evaluation), focusing mainly on the analysis of feelings of breach and violation. This paper proposes to give an overview of the literature concerning the most important modalities of measuring the PC, mainly identified in a North American and British conception.*

**Keywords:** *psychological contract; facets; characteristics; psychological contract breche; psychological contract violation.*

**JEL Classification:** M12.

## 1. Introduction to the measure of the psychological contract

Since 1990s, the psychological contract (PC) became a widely used tool for measuring the quality of the relationship between the employee and the employer. Defined as "the set of promises that play the role of obligations between the employee and the employer" (Rousseau, 1995), it has positive impacts on the engagement, the intention to remain in organizations and on behaviors of organizational citizenship.

The way in which the psychological contract of the employees was measured has evolved considerably in the 2000s, which means that we now have a rich literature that allow us to grasp the face of the psychological contract in varied types of enterprises or countries.

This paper proposes to give an overview of the literature concerning the most important modalities of measuring the PC, mainly identified in a North American and British conception. In the literature, there are three possible ways to propose the measure of the psychological contract (McLean Parks et al., 1998, Rousseau and McLean Parks, 1993, Rousseau and Tijoriwala, 1998). A first way is the apprehension of its content, while the second deals with its facets, also called characteristics. This second way measures the nature of the psychological contract. On the basis of these two elements, a typology of the

psychological contract was proposed (Rousseau, 1995, De Vos, 2002). The third way proposes the measurement of the psychological contract in relation to its realization (its evaluation), focusing mainly on the analysis of feelings of breach and violation. The following section will present a summary of the literature on these three modalities of measuring the psychological contract.

## 2. Content and the characteristics of the psychological contract

As mentioned earlier, the conceptualization of the psychological contract differs from one author to another. The framework of obligations deemed relevant for constituting the psychological contract in various categories also differs according to the approach chosen by each researcher. This makes it difficult to compare the results of the different studies.

*Grosso modo*, there are some broad categories of promises / obligations. Thus, the following general themes concerning employee obligations were retained: flexibility and employability, extra-role, sociability and integration, honesty and fidelity, performance. As regards the obligations of the employer, the themes are: remuneration, job security, development (training and career), recognition (respect and support), content of work, justice, communication, working hours (Dulac, 2005). This research trend was prolific in the early 2000s. More recent studies (eg Pepur et al., 2010, Gough and Arkani, 2011, Jempson, 2013) focus more on promises that are specific to companies going through the economic crisis (e.g. guaranteeing the pension fund for workers in the study of Gough and Arkani, 2011), and / or the importance attached to certain obligations (e.g. training courses offered by the company that become more important than personal / professional life balance) in the Pepur et al. (2010) study.

Despite its success until the early 2000s, the approach to measuring the psychological contract by its content has been criticized because it allows an apprehension of the psychological contract at a given moment and in a particular employment relationship (Sels et al., 2004). This measure suffers from a lack of stability and adaptability for all employees, work situations, jobs and organizations (Campoy et al., 2005).

To counter these disadvantages, another measure of the psychological contract was proposed by Rousseau and McLean Parks (1993), Rousseau and Tijoriwala (1998), Janssens et al., (1993) and Sels et al. (2004). This measure is based on what are called "facets" or "characteristics" of the psychological contract. These represent, according to Rousseau and McLean Parks (1993), broader general characteristics of the employment relationship that go beyond the obligations specific to a certain employment relationship.

The following table summarizes this perspective of measuring the psychological contract, presenting the characteristics identified and the studies that proposed them.

**Table 1.** The facets or characteristics of the psychological contract (according to Rousseau and McLean Parks, 1993, Rousseau and Tijoriwala, 1998, McLean Parks et al., 1998)

Characteristics of the psychological contract	Description
1. Tangibility (Explication of commitments)	Tangibility is the degree of employee perception that the terms of the psychological contract are defined unambiguously, explicitly specified and clearly observable by a third party. The psychological contract which is considered "tangible" if it is easily observable, and its terms are "public".
2. Scope	The scope of the psychological contract means the extent to which the boundary between work life and other aspects of someone's life is seen as permeable.

Characteristics of the psychological contract	Description
	The key idea of this characteristic is the overflow of professional life into private life.
3. Stability	Definition: the degree to which the change in the terms of the psychological contract is made through an explicit or implicit renegotiation of the contract.
4. Focus	The focus shows the relative importance accorded within the psychological contract to the socio-emotional elements vs those of an economic nature. Examples of socio-emotional elements include respect, honesty, friendship, loyalty and development opportunities.
5. Time frame	The time frame can be defined as the perception of the duration of the employment relationship (short or long term) and the envisaged time horizon (limited or unlimited)
6. Particularity of commitments	Definition: the degree to which the employee perceives the resources exchanged within the psychological contract as unique and non-replaceable. The key to this feature is dependence on irreplaceable resources
7. Will power	The volition refers to the perception of employees that they voluntarily participated in the definition of the nature and the terms of the psychological contract.

More recent studies (eg Janssens et al., 2003 and Sels et al., 2004) measured and validated six characteristics of the psychological contract. Four of them come from the typology of Mac Neil (1985) and have been described in the work of the researchers listed in Table 1, namely the explication, extent, stability and time frame of commitments. Apart from these, the authors have introduced two other facets of the psychological contract from the literature on industrial relations, which are the symmetry of exchange and the level of the contract.

The symmetry of the exchange represents, according to Sels et al. (2004), the degree to which the employee is willing to accept the manifestation of hierarchy and inequality in his / her employment relationship (e.g. accepting the existence of certain employer privileges, a formal relationship between different hierarchical levels or a formal way of addressing the hierarchical superiors).

In the view of the same researchers, the level of the contract represents the degree to which employees perceive the existence of an individual or collective regulation of their contract of employment, whether formal or psychological.

### 3. Breach and violation

The third way of measuring the psychological contract refers to the mechanisms for assessing the fulfillment of the promises/obligations that have been made throughout the employment relationship. In this sense, an important contribution of the work of Morrison and Robinson (1997) lies in the conceptual distinction between the breach and the violation of the psychological contract.

The breach has been defined, especially in empirical studies, as the perception of an individual that his organization has not fulfilled one or more obligations that make up the psychological contract. Morrison and Robinson (1997) argue that an employee can cognitively perceive that promises are not fulfilled, without strong emotional responses to the event. As a consequence, the authors clearly distinguish between the cognitive phenomenon of failure to fulfill promises, which represents the breach of the psychological

contract, and the emotional phenomenon of response to the breach of the psychological contract that represents violation. Other subsequent studies have empirically supported this differentiation (Morrison and Robinson, 2000, Coyle-Shapiro, 2002, Zhao et al., 2007).

Thus, breach of the psychological contract would result in a combination of feelings of disappointment and anger that cause the employee to feel indignation, resentment and outrage because he has been mistreated and betrayed (Morrison et al. Robinson, 1997).

It should be noted that if the appearance of the feeling of violation always follows the perception of rupture of the psychological contract, the perception of breach does not necessarily lead to feelings of violation of the psychological contract. For example, the study by Peyrat-Guillard (2008) conducted in France showed that the perception of breach of the psychological contract of employees of the Michelin site did not lead to a perception of violation because of the attribution of non-compliance with promises to a different entity than their employer (i.e. the shareholders of the company and the pressure they have exerted to achieve increased performance).

Many studies have shown that the perception of a discrepancy between what has been promised and what has been delivered (i.e. the breach) and the feelings of anger that may follow (i.e. the violation of the psychological contract) lead employee to re-evaluate his relationship with the representatives of his company. Most of the work that deals with the psychological contract has been concerned over time with the consequences of the breach and the violation of the psychological contract perceived by the employee. For example, empirical studies have demonstrated a significant impact of the breach and violation on workplace attitudes and behaviors: trust, emotional engagement, motivation at work, intention to stay or leave the organization, organizational citizenship behaviors, job satisfaction, general satisfaction in life or "deviant" behaviors (Bordia et al., 2008, Coyle-Shapiro and Kessler 1998, Coyle-Shapiro 2002, Guzzo et al. Jensen et al., 2010, Jenson, 2013, Raja et al., 2004, Robinson, 1996, Robinson and Rousseau, 1994, Turnley and Feldman, 2000, Zhao et al., 2007). More recently, Henderson and O'Leary-Kelly (2012), looking at the influence of non-fulfillment of the promises of the psychological contract on the self-identity of employees, found that the breach represents a threat to the self-identity that: i) negatively affects employee morale, ii) leads to "coping" behaviors such as seeking social support or trying to take revenge against the organization.

Other studies have shown that the perceived breach of the psychological contract following a dismissal has negative effects on the employee's confidence in the relationship with his/her next employer (Kim and Choi, 2010). Moreover, as described by Ng et al. (2010), the effects of the breach of the psychological contract are unstable over time. Thus, breach perceptions become more pronounced over time and are associated with a decrease in affective commitment and innovation-related behaviors.

In addition to looking at the employer's point of view regarding the employee's psychological contract, recent research broadens the psychological contract by adding another dimension that is the psychological contract of the employer (Tomprou and Nikolaou, 2011, Nadin and Williams, 2012). For example, Nadin and Williams (2011) found that employees who witnessed this violation by their colleagues had a feeling of destabilization of their own psychological contract. For its part, the employer felt at first betrayed by the employees at fault. He then turned to the rest of the employees, reassuring them that the terms of their psychological contract had not changed following this negative organizational event.

#### **4. Conclusion**

Many psychological contract researches carried out in the last twenty years, as well as our own research results, led us to conclude that the use of a single method does not make it possible to conclusively grasp the face of a psychological contract in a company or a given country. It is only by using a combination of measurement methods that one can describe and understand in a complementary way the psychological contract of the employees.



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# THE WAY IN WHICH MICROSOFT EXCEL SOFTWARE HAS EVOLVED IN THE MARKETING ACTIVITY OF SMALL BUSINESS COMPANIES IN THE BIHOR COUNTY

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**Abstract:** *The most of the decisions in marketing activity assume: analysis and processing of a large amount of information. This way, Microsoft Excel offers a multitude of easy using instruments to marketers. Thus, they can obtain quickly and easily information about the market, selling, consumers, which will be the basis for efficient decision making. Microsoft Excel software offers powerful data processing and analysis instruments for marketers, instruments which can be used when situation must be analyzed and decision must be taken. This paper presents a study about the way in which the use of Microsoft Excel software has evolved in the marketing activity of the Bihor County companies. For this study we used the results of a research conducted in year 2013 and we conducted a new research in this year. The results of the study revealed an increase of the Microsoft Excel software use in the marketing activity of the small business companies from the Bihor County for the analyzed period of time. There was an increase in the use data processing and analysis Microsoft Excel instruments in the marketing activity. But the increase was differentiated depending on the used instrument. An increasing number of companies are beginning to understand the importance of using data processing and analysis Microsoft Excel instruments.*

**Keywords:** *Microsoft Excel instruments; analysis and processing data; instruments software for marketers.*

**JEL Classification:** C83; M21.

## 1. Introduction

According to Kotler, marketing decisions are among the most difficult economic decisions (Kotler, 1976).

To solve marketing decisions Microsoft Excel offers a multitude of easy using instruments. With Microsoft Excel powerful data processing and analysis instruments marketers can obtain easily information which will be the basis for efficient decision making.

The power of computers and Microsoft Excel data analysis and processing tools are used differently by different companies. Some tools are used to a large extent and others to a lesser extent.

In this study we analysed the use of Microsoft Excel tools such as filtering, subtotals, pivot table and chart, Solver:

- Thru filtering, marketer can achieve in a quick manner, from a list, only the significant data needed to solve the existing decisional situation
- Subtotals allow a partial sum of the data inside a list, grouped on specific sets. It can be used for example, in analyzing the selling activity for each product category.
- Pivot tables is considered (Bălan and Dumitru, 2011) a simple method for relevant data extraction from a database, which can be used for quick design of a detailed report.

Charts show suggestive images of the data and of the relationships between them. Allow the drawing of trendlines that provide a picture of the evolution of data in the future.

- Solver uses techniques to find optimal solutions for many decision problems. In a ranking of the best data analysis tools for business, Jones (June 2014) positioned Solver on the ninth position. He said that "Solver is an optimization and

linear programming tool in excel that allows you to set constraints” (Jones, June 2014) and ”Although advanced optimization may be better suited for another program (such as R’s optim package), Solver will make quick work of a wide range of problems” (Jones, June 2014).

## 2. The premises and research methodology

We started from the hypotheses:

- Between 2013 and 2017 there was an increase in the use Microsoft Excel software in the marketing activity of small business companies in the Bihor county.
- Between 2013 and 2017 there was an increase in the use Microsoft Excel data processing and analysis instruments in the marketing activity of the small business companies in the Bihor county.

The following issues were considered:

- How much are used Microsoft Excel software in the marketing activity
- How complex is the analysis and processing of the data made in the marketing activity using Microsoft Excel software.

For this study:

- we used the results of a research conducted in year 2013
- we conducted a new research in this year.

To collect the information for year 2017, we used the same questionnaires as in 2013. Questions refer to the number of employees, marketing activities of the company, the complexity of the necessary reports in marketing activity, software applications known by the employees, software they daily use in marketing activities, how much Microsoft Excel software is used in processing and analyzing marketing data, the software instruments used for processing and analyzing marketing data (Țarcă, Mareș, and Mareș, 2013). Questionnaires were sent to those small companies (up to 10 employees), which during the 2013 research answered that they use Excel. Therefore 148 questionnaires were sent. 78 questionnaires were returned. These were used for analysis. The response rate was 52.70%.

## 3. Data analysis

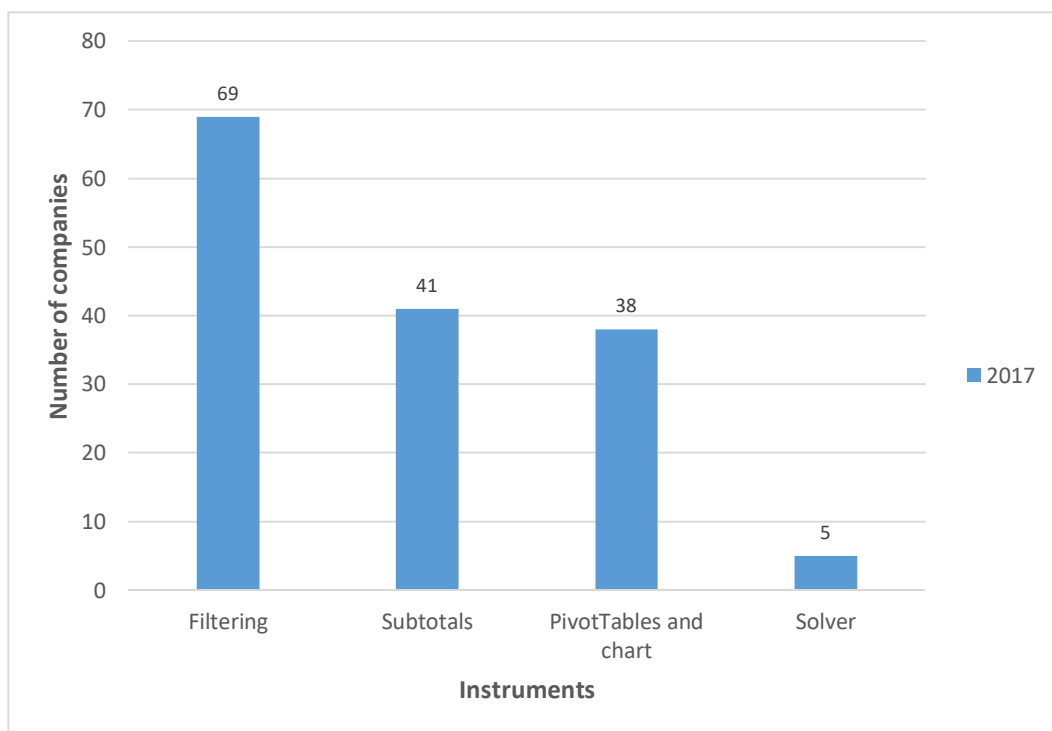
Collected data showed that:

- Nowadays, many of the small companies use Microsoft Excel data analysis instruments in marketing activity. Tools like filtering, subtotals and pivot table are used to a greater extent, while Solver is used in a lesser extent. Table 1 shows a synthesis of the results.

**Table 1:** The use of Microsoft Excel instruments (year 2017)

Number of companies/ Instruments used	Year 2017
Filtering	69
Subtotals	41
PivotTables and chart	38
Solver	5

For a better understanding of data meaning, they are represented as a chart in figure 1.



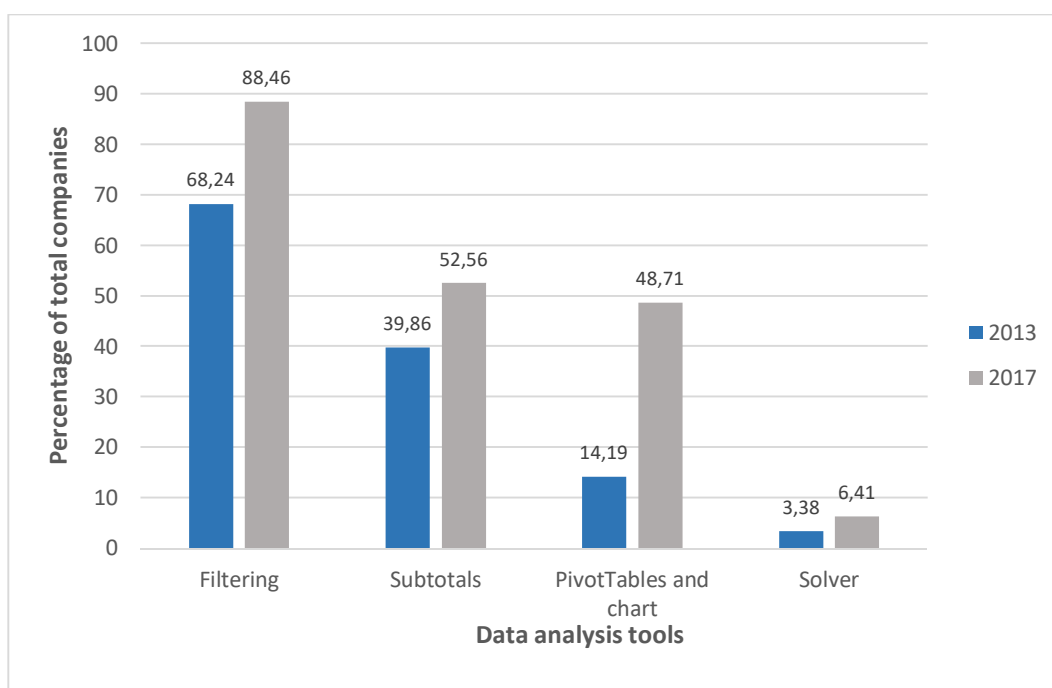
**Figure 1:** The use of Microsoft Excel instruments

- There was an increase in the use Microsoft Excel software in the marketing activity of small business companies in the Bihor county. The following table (Table 2) shows comparisons of data in 2013 vs 2017. Data from 2013 are taken from a previous study (Țarcă, Mareș, and Mareș, 2013), while data corresponding to 2017 represent the results of the current research.

**Table 2:** The use of Microsoft Excel instruments, depending on year (percentage)

Year/ Instruments used	2013	2017
	N %	N %
Filtering	68.24	88.46
Subtotals	39.86	52.56
PivotTables and chart	14.19	48.71
Solver	3.38	6.41

For a better understanding of data meaning, they are represented as a chart in figure 2.



**Figure 2:** The use of Microsoft Excel instruments (percentage)

- Compared to 2013, small companies give more importance in data analysis and processing. Compared to 2013, marketers use Microsoft Excel data analysis and processing instruments to a greater extent:
  - In 2013, 31.76% of the small companies used Microsoft Excel software especially in data inventory using spreadsheet forms. This has happened due to lack of knowledge in how to use working reports. Are used only simple formulas, usual functions (like sum, count, average, min, max) and sorting. (Țarcă, Mareș, and Mareș, 2013).  
Comparing data from previous months, decisions are made for future activities; nowadays only 11.53% of the small companies are using Microsoft Excel software at its basic techniques level.
  - In 2013, 68.24% of the small companies used Microsoft Excel software for data analysis; nowadays 88.46% of the small companies are using Microsoft Excel software for data analysis.
- 52.56% of the small companies use subtotal function for data analysis while 39.86% of them used the same facility in 2013.  
Subtotal function allows detailed information regarding sells or expenses during marketing decisions.
- 48.71% of the small companies use pivot tables and charts for data analysis while 14.19% of them used the same facility in 2013. Therefore, we noticed that a greater number of companies give importance to the use of tools which allow data organizing and presentation, for a better decision making processes.  
Pivot tables are very efficient tools for data analysis and presentation. They can be created quickly, with only few mouse clicks. They have a great flexibility and they can be quickly adapted to specific needs during data presenting activities.

- 6.41% of the small companies use Solver for data analysis while 3.38% of them used the same facility in 2013. Therefore, we noticed that still too few companies used Solver.

#### 4. Conclusions

According to the survey it has been noticed that for the analyzed period was an increase of the Microsoft Excel software use in the marketing activity of the small business companies from the Bihor County. Nowadays a small number of companies are using Microsoft Excel software at its basic techniques level.

Microsoft Excel software offers powerful data processing and analysis instruments for marketers, instruments which can be used when situation must be analyzed and decision must be taken. There was an increase in the use data processing and analysis Microsoft Excel instruments in the marketing activity. But the increase was differentiated depending on the used instrument. Thus:

- there was a greater increase in terms of the use of tools such as filtering, subtotal function, pivot tables and chart
- there was a very small increase in terms of the use of tools such as Solver

An increasing number of companies are beginning to understand the importance of using Microsoft Excel instruments for analysis and processing of data. They are beginning to realize that by using Microsoft Excel tools can obtain information to help them to make better marketing decisions.

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# AN INSIGHT ON HOW ORGANIZATIONS SUPPORT EMPLOYEE EFFICIENCY

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**Abstract:** *This paper is aimed at analyzing, from an empirical point of view, the relations between organizational behavior and employee efficiency along with their individual profitability within the organization. Efficiency has been and is a constant strategic goal for companies, no matter the business environment in which they operate. For this reason, the search for new ways of achieving higher levels of productivity never seems to stop. But, while it is relatively easy to achieve operational efficiency by implementing new technologies, or finding alternative, cheaper, materials to use in production, when it comes to increasing employee efficiency, organizations enter an ambiguous domain. The reason is simple: individuals cannot be treated as machines. For this reason, organizations have difficulties in finding out what are the best strategies for stimulating employee efficiency and individual profitability. The goal of this paper is to seek out relevant correlations between different variables related to organizational behavior and employee efficiency and profitability. In order to achieve this a quantitative research was performed on Romanian companies to better understand what are the particularities of organizational behavior that generate a positive impact on individual efficiency and profitability. It is paramount for organizations to create an environment that allows employees to fully use their unique capabilities and to encourage and support them in their activities. Individuals need to actively feel the managers' guidance in performing their activities, combined with the need to have a real impact on the organization. For this reason, implication in the establishment of strategic goals is encouraged as it motivates employees in achieving them with great efficiency. Furthermore, as it can be seen in this paper, organizations need to create an environment based on encouraging employees to be persistent in their work and to develop a strong will to succeed that ensures the achievement of the strategic organizational objectives. The findings in this paper allow managers and organizations to better understand certain particularities of organizational behavior and their influence on employee efficiency and profitability, in order to create an organizational environment focused on efficiency.*

**Keywords:** *organizational behavior; efficiency; strategy; competitive advantage; profitability.*

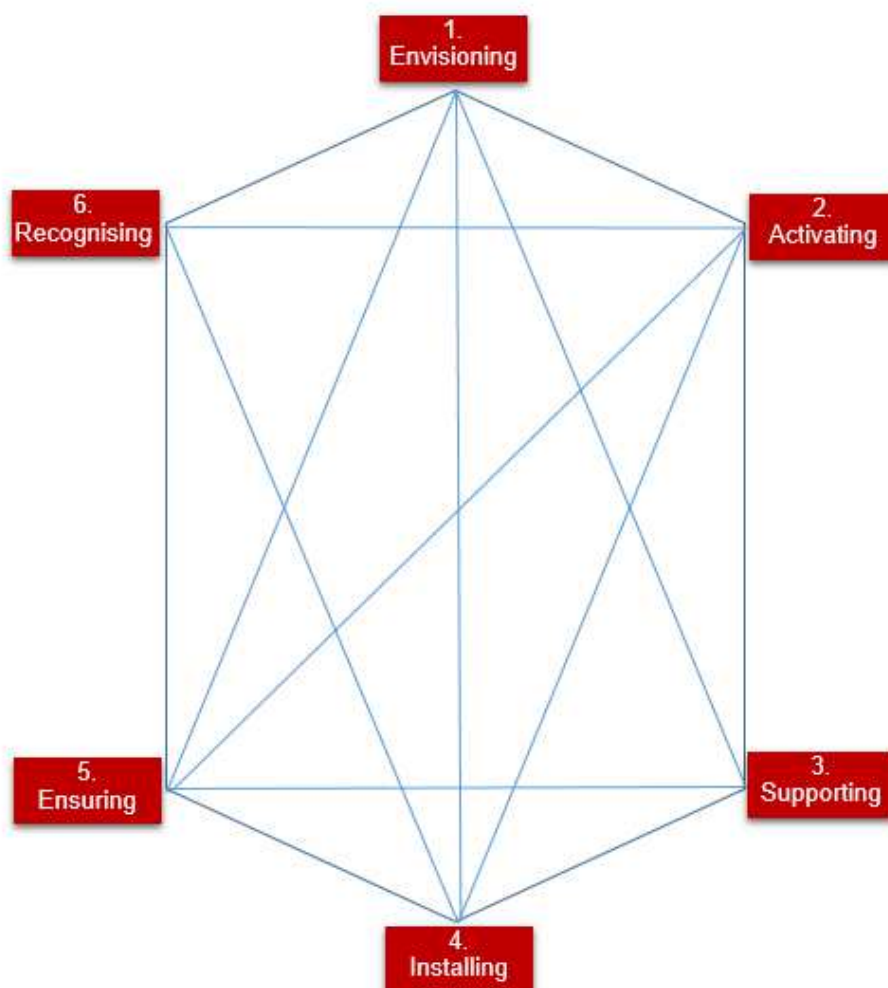
**JEL Classification:** *M12; J24; M51.*

## 1. Organizational behavior

The traditional sources for gaining competitive advantages, such as cost leadership, differentiation or focus, have lost ground in face of new, far less tangible sources, such as employee creativity, innovation or time. For this reason organizations constantly change their behavior in order to adapt to new challenges and pressures from both customers and other competitors. Thus, it has become extremely important to understand how organizational behavior influences the gain of sustainable competitive advantages in the light of the new particularities that characterize business environments today.

The study of organizational behavior deals with understanding, explaining, predicting and changing human behavior as it unfolds in organizational context. In order to achieve this, organizational behavior concentrates on employee behavior that is observable such as communication during formal and informal meetings or writing and presenting a report. By doing this, employee behavior is observed both at an individual level and also as a group,

and furthermore, groups are observed in order to better understand their behavior, as organizations are comprised of different groups working together in order to perform daily and long term activities (Wagner III & Hollenbeck, 2010). Also patterns of socialization are observed in order to best explain the process in which individual and organizational behavior patterns influence each other so as to reach an agreement related to the standards and expectations of each culture. For this reason, the process of socialization produces a series of effects on individual personality, attitude and behavior, group attitude and behavior and also to corporate behavior, style and identity, which in term affect the entire decision making process. Also, another visible organizational aspect is the leadership style used to promote ideology, values and reinforce culture within the organization. (Morden, 2007; Avram & Sabou, 2016).



**Figure 1:** A model for employee empowerment  
Source: Hussey, 1998

Of course, leadership is one of the key elements in supporting employee efficiency (Hitt *et al.*, 2006). Hussey (1998) proposes a model of actively involving and empowering individuals in order to ensure their full commitment to the organizational strategic goals and to ensure that their work is efficient. This model is comprised of six stages: envision, activate, support, install, ensure and recognize. Envisioning represents the process of developing a coherent



vision of the future in order to ensure the successful meeting of the strategic goals. Activating follows up close by communicating the vision to every member within the organization with the aim of understanding, supporting and sharing the vision. Supporting comes towards helping and motivating the employees to achieve more than that would consider to be possible by creating an organizational framework that offers full moral and practical support. Installing is aimed at developing the necessary plans, procedures and regulations in order to ensure that the formulated strategy is successfully implemented in the organization. This process uses all the commonly used tools and instruments such as plans, budgets, diagrams, etc. with the sole intent of meeting the main goals on which the strategy is based on. But, the process of designing the necessary procedures and tools aimed at implementing the strategy represents only half of the work. It is still necessary to make sure that those plans will be successfully carried out by the organization and for this reason the appropriate monitoring and control processes need to be used. Finally recognition to those involved in the process needs to be given. This recognition can be both positive and negative and should be used to reinforce change and to ensure that any obstacles are removed and progress is made.

Empowerment does not represent a pretext to give employees more responsibilities for less rewards, empowerment needs to be aimed at supporting employees to take more control over their jobs and working environment, to enhance the individual and collective contributions of employees and to allow them to seize every opportunity for personal growth and self-fulfillment. Empowering individuals implies the formation of meaning or sense of purpose in their work, freedom in choosing how to perform their activities and tasks, creating a feeling of competence with the skills that individuals possess and showing confidence that they can perform their work, and that they can influence and have a meaningful impact over the outcomes at their working place (*Leadership and Management in Organizations*, 2007; Boca, 2014). Spelling the objectives in a clear manner helps organizations create a result orientated behavior, but only if the formulated goals are, first of all, communicated to all individuals and if the goals are reasonable, but challenging. One must not forget here the importance of linking the reward system to employee performance. The reward system needs to correlate the individuals' actions and objectives with the needs of the organization. By designing a fair rewards system that is seen and known by every individual, organizations can actively influence the efficiency and performance of their employees (Abass, 2003; Verweire & Van Den Bergh, 2004, Sabou *et al.*, 2010).

## 2. How do we support employees to generate superior performance?

According to some authors (White, 2004; Williams, 2009) an organizational behavior that supports employee efficiency is typical to role cultures. This type of corporate culture is characterized, first of all, by functional specialization reflected by the existence of separate functional units that are coordinated by senior managers. Another key aspects of this type of culture are the existence of professional standards, professional values and professional codes of behavior. Unfortunately, the high level of specialization leads to an increase resistance to change and adaptability and the multiple levels of responsibility, that in time have the potential to develop into excessive bureaucracy.

The link between individual high-performance practices and organizational performance is extremely strong, for this reason managers need to pay close attention to several key aspects that actively influence employee performance. These aspects relate to (Greer, 2003):

- Employment security.
- Selective hiring of new personnel.
- Self-managed teams and decentralization of decision making as the basic principles of organizational design.
- Comparatively high compensation contingent on organizational performance.

- Extensive training.
- Reduces status distinctions and barriers, including dress, language, office arrangements and wage differences across levels.
- Extensive sharing of financial performance information throughout the organization.

According to Stredwick (2005), there are two main purposes driving performance management: *operational* and *cultural*. The operational reasons serve to lead and control individuals in an increasingly competitive business environment by offering guidance and direction towards the organization's strategic goals. Thus, the performance management systems form a link between the organization's mission and vision and the required employee performance. Also, from an operational point of view, the performance management systems are designed to act as a measure of efficiency, allowing for an easy identification of the strongest and the weakest employee; the strongest will be used as a role model for others, while for the weakest, support, in form of coaching and training, will be supplied. On the cultural side, the performance system can be used to create a more open environment within the organization where strategic goals are shared and where individuals can share and improve their ideas through open discussions with others. Also, by actively participating to the formulation of strategic goals, motivates individuals to reach those goals due to the fact that they are directly responsible for them.

When it comes to the specific factors that influence employee involvement and performance, research has shown (Arthur, 1994) that organizations that have a high – commitment strategy register superior levels of productivity and quality in comparison with control strategy. In terms of productivity, employee motivation was shown to have the biggest influence, while financial performance is influenced by employee skills, motivation and organizational structures (Huselid, 1995).

A study by Purcell (2003) revealed that the most successful companies had a clear vision and, also, a set of integrated values that were embedded and managed within the organization. These values were aimed at encouraging and sustaining performance and flexibility. Operational performance was also observed to be related to employee satisfaction, motivation and commitment.

### 3. Research and findings

The main purpose of this paper is to analyze from an empirical point of view how certain particularities in organizational behavior influence employee performance and efficiency. The research on which this paper is based is a result of the answers provided by companies from the North – Western part of Romania. In total more de 200 valid questionnaires were gathered in order to analyze the links between organizational behavior and employee efficiency.

The independent variables used in this study are related to individual efficiency, on one hand, and with individual profitability on the other. These variables were correlated with items that have to potential to support employee efficiency and profitability, items that refer to analyzing situations from different perspectives, offering support and guidance, making sure that all activities and tasks are carried out or ensuring active support for surpassing one's own limits.

In order to better understand how organizational behavior affects employee performance, it was hypothesized that:

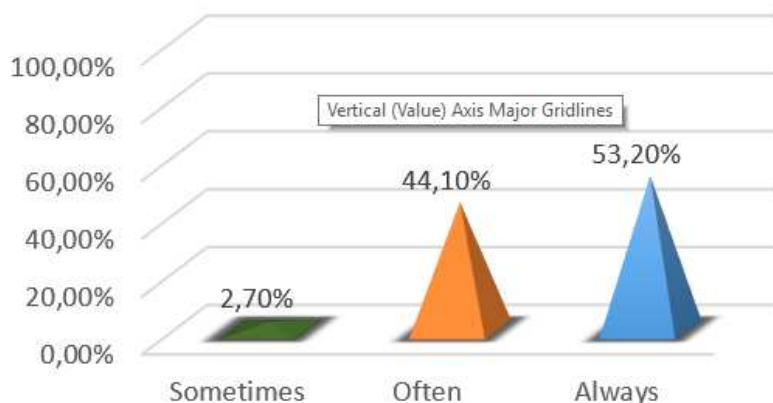
- Offering guidance to the employees allows them to become more efficient and thus more profitable;
- Ensuring that all task are carried out with success allow employees to become more efficient.

- Higher profitability can be obtained by encouraging employees to overpass their limits and by motivating them to be successful.

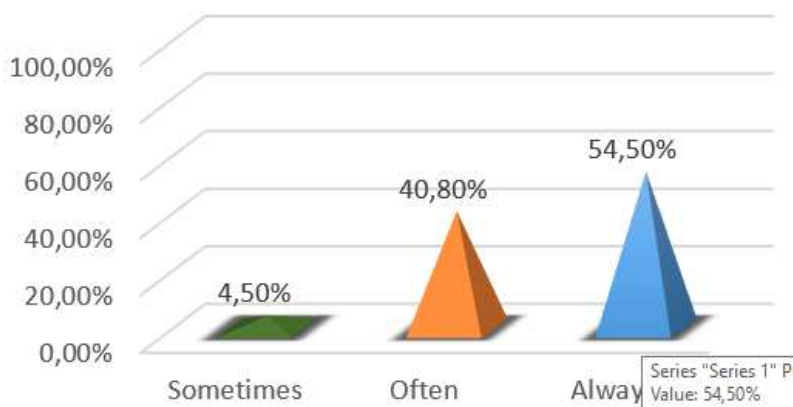
- Clear communication of mission and vision encourages employees to be efficient.

The normality test's values which were obtained showed that the data collected is very well modelled and has a normal distribution. Furthermore, the value of the Pearson's linear correlation coefficient ( $r$ ) which has to be above 0.29 and that of the significance of correlation coefficient ( $p$ ) which has to be below 0.05, revealed some relevant correlations between the variables selected in this study and employee efficiency and profitability.

The descriptive statistics, as it can be seen in the figures below, reveal that the vast majority of respondents consider their work within organizations to be efficient and also profitable. Thus, 44.1% of the respondents declared that their work is often efficient and 53.2% declared that their work is always efficient. Regarding individual profitability, more than half of the respondents (54.5%) answered that their work is always profitable and 40.9% answered that their work is often profitable.



**Figure 2:** Work Efficiency  
Source: self-representation



**Figure 3:** Work profitability  
Source: self-representation

The statistical analysis of the information gathered during the research has shown that offering professional guidance to employees does lead to an increase both in their efficiency (*the value of the Pearson's linear correlation is 0,401 and the value of the significance coefficient is 0*) and also in their individual profitability (*the value of the Pearson's linear correlation is 0,337 and the value of the significance coefficient is 0*). As we can see it is very important for managers to actively support individuals and offer them guidance in performing their organizational tasks and responsibilities. Furthermore, it is imperative that this support extends in assuring that the designated tasks are completed and the desired results are registered. Results have shown that there is a valid and relatively strong link between efficiency and profitability and seeing the end results of one's activity (*the value of the Pearson's linear correlation is 0,328 in the case of efficiency and 0,355 in the case of profitability, with the value of the significance coefficient being 0*).

When it comes to how encouragement to surpassing one's limits influences efficiency, the results have shown a valid, but not relevant statistical link between managers' efforts to influence employees into overcoming their personal barriers and the performance they register at work (*the value of the Pearson's linear correlation is 0,266 and the value of the significance coefficient is 0*). However, although there was no correlation with employee efficiency, the results have shown that overcoming personal barriers leads to an increase in individual profitability (*the value of the Pearson's linear correlation is 0,335 and the value of the significance coefficient is 0*). Furthermore, it was discovered that profitability is positively influenced by a strong motivation from managers designed to develop a will to succeed (*the value of the Pearson's linear correlation is 0,316 and the value of the significance coefficient is 0*).

As we could see in this article, a clear communication of mission and vision leads to an increase in employee performance, but the result obtained during the research have revealed a statistically valid, but not relevant, correlation between a high awareness of the organization's mission and employee efficiency (*the value of the Pearson's linear correlation is 0,271 and the value of the significance coefficient is 0*) and a weak correlation with individual profitability (*the value of the Pearson's linear correlation is 0,292 and the value of the significance coefficient is 0*). Thus, the efforts of managers to clearly communicate and raise awareness regarding the organization's mission do not have the expected outcomes and do not make employees become more efficient or more profitable.

#### 4. Conclusion

This article set out to offer a better understanding of the connections between some characteristics of organizational behavior and their influences on employee efficiency. Organizations and their employees seek out constant ways of improving work efficiency mainly due to the fact that an increase in work efficiency leads to a higher profitability, which in turn leads to a higher paycheck for employees. But, we must take into consideration the fact that an increase in employee efficiency can only be achieved in an organizational environment that actively support individual or collective efforts to become more productive. Although there are numerous ways to support employees into becoming more efficient, such as open communication, compensation systems that focus on productivity or professional training programs, one must consider that each employee has its own particularities and each organization is individual in terms of behavior.

The research in the present article is based, but not limited, to several hypotheses, that, as we could see, focus on better understanding the links between some characteristics of organizational behavior. As it can be seen it is extremely important for organizations to offer guidance and support to their employees as it leads to an increase both in efficiency and also in individual profitability. Individuals that feel supported in performing their work tasks have and increase sense of implication in how the organization reaches its strategic goals.

This implication leads to individual responsibility for the outcomes and their efficiency. Also, seeing the end results of one's work in an extremely powerful motivator and organizations that emphasize this, have employees that are more efficient and more profitable.

Although overcoming one's own limits represents a key element for professional developments, the results of the study have not shown a valid link between this and employee efficiency, but have revealed that overcoming limits does lead to an increase in individual profitability. This could be explained by the fact that employees do not feel motivated by the managers' constant encouragement to achieve more and to become more. It is possible that employees, although they want to become more efficient, need to achieve this at their own pace and by using intrinsic motivational factors.

From a theoretical point of view, this article offers a better understanding of how certain particularities of organizational behavior influence employee efficiency and furthermore how organizational performance is influenced. This article is only a piece in the great puzzle that is represented by the synergies between organizations and their employees and how the relationships between them are formed and lead to performance and possible competitive advantages.

The practical implications of this article reside in offering managers several guidelines in ensuring that their employees are working efficient, guidelines that refer to a constant guiding and supporting of employees in their day-to-day work, in allowing them to see the big picture, in other words the end result of their work. Not last, managers need to develop a strong will to success to their employees in order to motivate them into achieving the desired goals, no matter what the impediments are.

This study can be extended and improved in the future, by taking into consideration more particularities of organizational behavior and by a detailed analysis of individual characteristics of employees that have the potential to lead to an increase in their efficiency and performance.

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## THE EFFECTS OF THE EU MEMBERSHIP ON THE EXTERNAL TRADE OF ROMANIA

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**Abstract:** *The research carried out on Romania's foreign trade performance aimed at establishing the impact of the Romania's accession to the EU onto the Romanian external trade balance. Another important scientific contribution is the analysis of the impact of the new Romanian trade policy on the general evolution of Romania's foreign trade during the period 1995-2016, for which we used a series of general indicators that we usually find in the statistical yearbooks, under the names of: export value (FOB prices); import value (CIF prices); value of imports (FOB prices); trade balance (FOB exports - CIF imports); trade balance (FOB exports - FOB imports); export per capita. In today's context, it is justified to identify innovative methods and strategies for establishing and capitalizing on the competitive advantages of Romanian companies engaged in foreign trade as a result of our country's accession to the European Union, in order to solve the complex economic problems generated by the major trade deficit of Romania, as well as the creation of mechanisms for implementing the strategies and methods resulting from the researchers conducted to reduce this deficit and to maximize the positive effects of Romania's accession to the EU. As this article shows, Romania's degree of international openness has been sinuous, with the year 2016 being the year when it reached the maximum value of the analyzed period of 83.71%. To this result, an important contribution was almost equal to exports and imports (around 42.32% of trade opening from imports and 41.39% of exports), which represents a significant improvement over the period 2000-2013. Also our analyse for Romania shows that excepting the years 1995-1996, 1998, 2000-2001 and 2003-2007, respectively, 2016, the coefficient of elasticity of imports was higher than the modulus of elasticity of exports, although subunit in the years 1997, 1999, 2005, 2007-2009 and 2013 respectively. Certainly, future research directions will mainly address and develop the same directions we have been dealing with so far, but deepening our research in several directions, such as: regulatory aspects of international trade by investigating the extensive ramifications of the tensions that exist in the relationship between the WTO and the regional trade agreements, which we consider to be of systemic significance, as they also place strong emphasis on Romanian foreign trade and commercial policy, Romania, as an EU member, being part of more than half of the world's functioning bilateral trade agreements; geographic reorientation of Romania's foreign trade by providing studies to Romanian business agents enabling them to maximize the opportunities offered by the rich portfolio of free trade agreements made available by the European Union on the basis of the products that make up current structure.*

**Keywords:** *external trade; international openness; GDP; Gross Capital Formation; elasticity coefficient; Romania; EU membership; trade balance.*

**JEL Classification:** *F10; F13; F14; F15.*

## 1. Introduction

In today's context, it is justified to identify innovative methods and strategies for establishing and capitalizing on the competitive advantages of Romanian companies engaged in foreign trade as a result of our country's accession to the European Union, in order to solve the complex economic problems generated by the major trade deficit of Romania, as well as the creation of mechanisms for implementing the strategies and methods resulting from the researches conducted to reduce this deficit and to maximize the positive effects of Romania's accession to the EU.

In particular, the empirical studies carried out on Romania's foreign trade performance aimed at establishing, on the one hand, the products with which Romania is competitive in the foreign markets and which are the external markets that the Romanian products are most competitive, so that the responsible factors the Romanian foreign trade can adopt the strategy of correct and scientifically based promotion at a macroeconomic level and on the other hand to indicate to the Romanian economic agents the directions they must orientate or reorient their exports in order to maximize the derived positive effects from the EU accession, taking advantage of the free trade agreements that we have also taken as partners from the moment of Romania's accession to the EU, agreements that create us access in advantageous conditions, of high competitiveness, on foreign markets with which our country did not agree before the accession, and at the same time to encourage the export activity of the Romanian economic agents that produce products identified in the researches carried out in this study, as having a high competitive potential for export on the markets concerned. Also, the analysis of the international openness of the Romanian economy, the concentration of foreign trade, and the dynamics of foreign exchanges was carried out.

## 2. Economic Theory and Model

The complexity of aspects of the notion of competitiveness attributed to exports is reflected in the existence of a variety of associated methods and indicators. Cojanu et al. (2006) identifies three methods of assessing and monitoring the competitiveness of a country, methods that generally apply to export competitiveness: inventory analyzes based on tracking certain performance indicators; composite indices used for multi criteria analyzes; statistical and econometric methods (modeling). More recently, Țurlea et al. (2014) contributes to the literature dedicated to Romania's export competitiveness analysis with a new perspective on the 2001-2011 decade including the years of world economic growth (mainly 2003-2007) and the first years of the global economic crisis (2009-2011), and proposes the overlapping of two analyzes complementary: analysis of export performance dynamics and internal revenue analysis created by exporting producers and their suppliers. The theme of European economic integration and that of Romania's accession and integration into the EU have also been the subject of in-depth research.

Another important scientific contribution is the analysis of the impact of the new Romanian trade policy on the general evolution of Romania's foreign trade during the period 1989-2006, for which we used a series of general indicators that we usually find in the statistical yearbooks, under the names of: export value (FOB prices); import value (CIF prices); value of imports (FOB prices); trade balance (FOB exports - CIF imports); trade balance (FOB exports - FOB imports); export per capita. With the help of these indicators, it was possible to observe the evolution of the Romanian foreign trade in time, and so general comparisons with other countries could be made. The terms of these comparisons, although quite superficial and non-leveled under the complex world economy, have nevertheless allowed for an ascending or descending evolution of exports or imports and have served to identify the underlying causes of these phenomena Romania.



This analysis was necessary in order to be able to make an objective picture of the evolution of our foreign trade during the period in which we were making the necessary efforts to join the European Union. Conclusions such as those presented in the previously referenced book are the only possible ones based on the information contained in the general indicators use.

### 3. The International Openness

The international openness of an economy reflects the degree of integration of the foreign trade of the economy into the world economy and takes into account dimensions such as the export, import and gross domestic product of the analyzed economy. The higher the degree of openness of an economy, the more the country is more integrated into international trade and consequently more dependent on external markets. The indicators of the openness of Romania's foreign trade so calculated reflect our country's involvement in foreign trade. The inclusion of the coverage level allowed us some conclusions regarding the structure of the openness of the Romanian economy, namely whether the openness is based on imports or on exports (if the coverage is below 100%, then it is a net openness based on imports, fact also expressed by the other calculated indicators).

As can be seen from Table 1, Romania's degree of openness has been sinuous, with the year 2016 being the year when it reached the maximum value of the analyzed period of 83.71%. To this result, an important contribution was almost equal to exports and imports (around 42.32% of trade openness from imports and 41.39% of exports), which represents a significant improvement over the period 2000-2013.

Table 1 shows that Romania's tendency to open up external trade is obvious, with an ascending rhythm in the period 2010-2016, and the sinuosity recorded during this period are insignificant to say that there was a tendency to diminish the openness 2008-2009), especially as they were mainly due to the international economic and financial crisis (see support for this assertion, the data in Table 2 for 2008 and 2009). According to the data calculated in Table 1, the openness effect is mostly due to relations with the EU during the pre-accession period, the EU membership in the post-accession period and, respectively, the trade liberalization policy adopted by Romania in 1990, which aimed precisely at the international openness of the country. It could be considered that the situation would have been positive even if there were no trade imbalances, the deficit of which ranged between 0,44% (2014) and 14,30% (2007) of GDP in the analyzed period, has affected domestic equilibrium, with Romania having to resort to external financing resources. As a result, the perpetuation of this deficit (albeit sub-unitary between 2013 and 2016) will increasingly erode national income, sufficient reason to take any measures is considered necessary to reduce imports, given that a considerable increase in exports is a little possible in the short term, involving competitive products, ie massive restructuring of the entire national economy or even reindustrialization. The share of exports in GDP also registered an upward trend in the post-accession period (excluding 2008), the maximum being reached in 2016, when the share was 41.39% - the highest in the last 17 years, which could significantly and positively influence the situation presented above, the more it tends to be equal to the share of imports, the difference being however subunit in the last 4 years (2013-2016), even if this difference is still in favor of imports.

Romania, compared with other countries in the region that started along the path of European integration with our country, but with a weaker economic situation at that time, and compared with Germany (the second largest exporter after China) and with the Union As a whole, is reflected in Table 2, which shows, firstly, that the international openness of Hungary, Bulgaria and the Czech Republic is over 100% since 2005 (Hungary even since 2000). In addition, the share of exports, even if exceeded by the share of imports in GDP, is more than 50%, showing that these three countries are open to the outside due to both imports and exports.

**Table 1.** International openness of Romania - indicators calculated for the period 2000-2016

Year	Export FOB	Import CIF	GDP	Openness degree =(1+2)/3	Exports in GDP =1/3	Imports in GDP =2/3	Trade Balance in GDP =(1-2)/3	Coverage degree =1/2
	mil. Euro	mil. Euro	mil. Euro	%	%	%	%	%
2000	13.346,90	15.501,60	40.796,80	70,71	32,72	38,00	-5,28	86,10
2001	14.996,70	18.447,00	45.503,50	73,50	32,96	40,54	-7,58	81,30
2002	17.193,20	19.926,70	48.810,40	76,05	35,22	40,82	-5,60	86,28
2003	18.283,90	22.214,90	52.931,00	76,51	34,54	41,97	-7,43	82,30
2004	21.882,60	27.372,10	61.404,00	80,21	35,64	44,58	-8,94	79,94
2005	26.401,10	34.512,30	80.225,60	75,93	32,91	43,02	-10,11	76,50
2006	31.553,20	43.296,70	98.418,60	76,05	32,06	43,99	-11,93	72,88
2007	36.548,90	54.484,00	125.403,40	72,59	29,15	43,45	-14,30	67,08
2008	38.353,90	57.222,50	142.396,30	67,12	26,93	40,19	-13,25	67,03
2009	32.958,20	40.676,10	120.409,20	61,15	27,37	33,78	-6,41	81,03
2010	40.941,40	48.724,80	126.746,40	70,74	32,30	38,44	-6,14	84,03
2011	49.117,50	56.537,90	133.305,90	79,26	36,85	42,41	-5,57	86,88
2012	50.018,80	56.659,00	133.511,40	79,90	37,46	42,44	-4,97	88,28
2013	57.338,20	58.457,20	144.253,50	80,27	39,75	40,52	-0,78	98,09
2014	61.934,80	62.596,50	150.357,50	82,82	41,19	41,63	-0,44	98,94
2015	65.759,40	66.743,00	159.963,70	82,83	41,11	41,72	-0,61	98,53
2016	70.181,90	71.773,10	169.578,10	83,71	41,39	42,32	-0,94	97,78

Source: For the period 2000-2011, *Table 1* of the book: Giurgiu, Adriana (2013); for the period 2012-2016, own calculations based on the data series presented and collected from EUROSTAT (link <http://ec.europa.eu/eurostat/web/national-accounts/data/database#>), accessed during June-August 2017.

**Table 2.** Indicators of the international openness of the economy and the gross capital formation, computed comparatively for some economies (countries), including Romania (1995-2000-2005-2011-2012-2014-2015-2016)

Country										
Year	1995	2000	2005	2010	2011	2012	2013	2014	2015	2016
<b>Openness Degree</b>										
EU	56,93	67,03	69,57	76,31	81,79	83,29	83,18	83,52	84,62	84,93
Bulgaria	99,15	78,29	100,50	103,21	117,76	124,78	129,71	130,97	128,07	124,07
Czech Republic	100,8	98,23	122,02	128,97	138,78	147,54	147,98	158,73	156,10	151,60
Germany	47,13	61,39	70,42	79,30	84,75	85,87	84,84	84,49	85,76	84,27
Poland	50,01	60,79	70,27	82,11	87,08	89,33	90,69	93,74	95,95	100,68
Hungary	87,07	137,28	127,86	159,16	168,21	166,82	165,00	170,37	172,54	174,70
Romania	51,26	70,71	75,93	70,74	79,26	79,9	80,27	82,82	82,83	83,71
<b>Exports in GDP</b>										
EU	29,17	33,66	35,16	38,58	41,42	42,60	42,86	43,10	44,04	44,19
Bulgaria	50,6	36,47	42,86	50,18	59,07	60,80	64,65	65,01	64,11	63,57
Czech Republic	48,8	48,19	62,18	66,03	71,31	76,17	76,87	82,55	81,05	79,54
Germany	23,77	30,83	37,74	42,25	44,82	45,98	45,40	45,70	46,87	46,12
Poland	43,37	66,82	62,80	82,25	87,17	86,77	86,00	88,66	90,73	92,51
Hungary	25,68	27,23	34,61	40,06	42,56	44,44	46,32	47,59	49,52	52,28
Romania	22,29	32,72	32,91	32,3	36,85	37,46	39,75	41,19	41,11	41,39
<b>Imports in GDP</b>										
EU	27,75	33,37	34,41	37,73	40,37	40,69	40,32	40,42	40,58	40,74
Bulgaria	48,55	41,82	57,63	53,03	58,69	63,97	65,06	65,96	63,96	60,51
Czech Republic	51,99	50,04	59,83	62,94	67,48	71,37	71,11	76,18	75,05	72,06
Germany	23,36	30,56	32,68	37,05	39,93	39,89	39,44	38,78	38,88	38,15
Poland	43,7	70,46	65,06	76,92	81,04	80,06	79,00	81,71	81,82	82,19
Hungary	24,32	33,56	35,67	42,05	44,52	44,88	44,37	46,15	46,43	48,40
Romania	28,97	38,00	43,02	38,44	42,41	42,44	40,52	41,63	41,72	42,32
<b>Trade Balance in GDP</b>										
EU	1,42+	0,30+	0,76+	0,86+	1,05+	1,91+	2,54+	2,68+	3,46+	3,45+
Bulgaria	2,05+	-5,35	-14,77	-2,85	0,38+	-3,17	-0,41	-0,94	0,15+	3,06+
Czech Republic	-3,19	-1,85	2,35+	3,09+	3,83+	4,80+	5,76+	6,36+	6,00+	7,48+
Germany	0,41+	0,27+	5,06+	5,20+	4,89+	6,09+	5,96+	6,92+	7,99+	7,97+
Poland	-0,33	-3,64	-2,26	5,33+	6,13+	6,71+	7,00+	6,94+	8,91+	10,31+
Hungary	1,36+	-6,33	-1,06	-2,00	-1,96	-0,44	1,95+	1,44+	3,09+	3,89+
Romania	-6,67	-5,28	-10,11	-6,14	-5,57	-4,97	-0,78	-0,44	-0,61	-0,94
<b>Gross capital formation in GDP</b>										
EU28	21,9	22,7	21,5	20,4	20,9	19,7	19,3	19,8	19,7	20,0

Country	Year	1995	2000	2005	2010	2011	2012	2013	2014	2015	2016
EU15		21,8	22,6	21,3	20,2	20,7	19,4	19,2	19,6	19,5	19,9
Euro Area – EA*		22,4	23,5	22,1	21,0	21,5	20,0	19,5	19,9	19,8	20,1
Euro Area - EA (19 state)		22,4	23,6	22,2	21,0	21,5	20,0	19,6	19,9	19,8	20,1
Euro Area - EA (18 state)		22,4	23,6	22,2	21,0	21,5	20,0	19,6	19,9	19,8	20,1
Euro Area - EA (12 state)		22,4	23,5	22,1	20,9	21,5	20,0	19,5	19,9	19,8	20,1
Bulgaria		12,2	19,2	27,9	22,6	21,5	21,9	21,3	21,4	21,2	20,3
Czech Republic		33,7	31,4	29,1	27,1	27,0	26,2	24,7	25,9	28,0	26,3
Germany		23,7	23,9	18,8	19,6	21,1	19,3	19,5	19,5	19,1	19,2
Poland		23,2	28,3	25,5	20,7	20,5	19,5	21,1	22,9	21,7	19,1
Hungary		19,7	24,6	19,9	21,3	22,4	21,0	19,0	20,4	20,5	19,6
Romania		23,6	19,8	23,9	26,8	27,9	26,8	25,6	24,7	25,0	25,0
<b>Gross fix capital formation in GDP</b>											
EU28		20,9	21,9	21,3	20,1	20,2	19,7	19,3	19,4	19,5	19,8
EU15		20,9	21,7	21,1	19,9	20,0	19,6	19,1	19,2	19,3	19,8
Euro Area – EA*		21,5	22,6	22,0	20,7	20,8	20,2	19,6	19,7	19,8	20,3
Euro Area - EA (19 state)		21,5	22,7	22,1	20,7	20,8	20,2	19,6	19,6	19,8	20,3
Euro Area - EA (18 state)		21,5	22,7	22,1	20,7	20,8	20,2	19,6	19,7	19,8	20,3
Euro Area - EA (12 state)		21,4	22,6	22,0	20,7	20,8	20,2	19,6	19,6	19,8	20,3
Bulgaria		11,6	16,8	25,9	22,2	20,9	21,3	21,1	21,1	21,0	19,1
Czech Republic		33,3	30,6	28,2	26,9	26,5	25,9	25,1	25,1	26,5	25,0
Germany		23,4	23,0	19,1	19,4	20,3	20,1	19,7	20,0	19,9	20,0
Poland		21,8	25,5	23,9	20,3	19,8	19,4	20,9	21,8	21,7	17,8
Hungary		17,4	23,7	18,9	20,3	20,7	19,8	18,8	19,7	20,1	18,1
Romania		21,4	19,3	24,3	25,9	27,1	27,3	24,7	24,3	24,8	22,7
<b>Share of final consumption expenditure and gross capital formation in GDP</b>											
EU28		98,5	99,7	99,2	99,1	98,9	98,1	97,5	97,3	96,5	96,6
EU15		98,4	99,5	99,0	99,0	98,8	98,0	97,5	97,3	96,5	96,6
Euro Area – EA*		98,3	99,0	98,4	98,6	98,6	97,3	96,6	96,4	95,5	95,6
Euro Area - EA (19 state)		98,5	99,3	98,5	98,7	98,6	97,3	96,7	96,5	95,5	95,6
Euro Area - EA (18 state)		98,5	99,2	98,5	98,6	98,6	97,3	96,7	96,4	95,4	95,6
Euro Area - EA (12 state)		98,5	99,2	98,4	98,6	98,6	97,3	96,7	96,5	95,4	95,6
Bulgaria		87,6	105,3	114,8	102,8	99,6	103,2	100,4	100,9	99,9	96,9
Czech Republic		103,1	101,8	97,7	96,9	96,2	95,2	94,2	93,6	94,0	92,5
Germany		99,5	99,7	94,9	94,8	95,1	93,9	94,0	93,1	92,0	92,0
Poland		100,0	103,6	102,3	94,7	93,9	93,3	93,0	93,1	91,1	89,7
Hungary		97,8	106,3	101,1	102,0	102,0	100,4	98,1	98,6	96,9	96,1
Romania		105,0	105,3	110,1	106,1	105,6	105,0	100,8	100,4	100,6	100,9

Source: Own calculations based on data provided by EUROSTAT („GDP and main components (output, expenditure and income) (nama\_10\_gdp)”, available online at: <https://goo.gl/BKhy6T>, accessed between 26.06.2012-31.07.2017) and National Statistical Offices, as well as the data available in the book Giurgiu, Adriana (2008).

Explanation: + = surplus; - = deficit.

\* This is the Euro Area - EA: EA11-2000, EA12-2006, EA13-2007, EA15-2008, EA16-2010, EA17-2013, EA18-2014, EA19

Notable exceptions are made by the Czech Republic since 2005 and Hungary since 2010, when the share of exports is constantly higher than that of imports, which shows us that the large international openness of these states is predominantly driven by exports. Poland also stands in this direction, starting with 2013, alongside Bulgaria, starting in 2015. The most positive example in the sense of the above is given by the situation in Germany, which thus confirms its leading position among the world's exporters in the period 1995-2016 and the second largest world exporter (after China), and whose international openness seems not to have been affected by the crisis, which once again demonstrates that an economy based on industrial production and products competitive is strong regardless of the international situation.

The European Union (as a whole), Bulgaria, Poland and Romania register a more unfavourable situation in terms of openness, with open market shares below 100% and a relatively high domestic input rate (with the exception of the EU). It is worth noting the situation of Romania, which, with the exception of the years 2000-2005, remained below the EU average throughout the analyzed period, as all the other analyzed countries managed to exceed the EU average from 2010, so that after 2010 until today, Romania is the only country below the EU average in terms of openness.

Table 2 also shows that the share of GDP in Bulgarian and Polish exports is higher than in Romania during the analyzed period, while a heavily globalized country, Germany, has a share of GDP openness and a share of GDP exports higher than the share of imports, which justifies the existence of a trade surplus with a small share of GDP in order not to seriously affect the country's overall balance.

From Table 2 it follows that the openness of Romania during the analyzed period is not high enough, the higher share of imports than that of exports is not beneficial to our economy at all, than in the case where our country imported mostly high-performance productive technology, for investment purposes (gross fixed capital formation). Gross fixed capital formation (GFCF) refers to the net increase in physical assets (investment minus consumption) during the analysis period. GFCF does not reflect fixed capital consumption (depreciation) and also does not include land acquisitions, as a component of expenditure approach when calculating GDP. Therefore, in the case of Romania, if the increase in imports would be proportionate to the GFCF, the results would soon be reflected in the increase of the productivity and competitiveness of our export products, by the positive effect generated by the increase of the gross fixed capital formation in an economy. Unfortunately, as can be seen from Table 1, this is not the case with our economy.

The dynamics of foreign exchanges is represented in Table 3 by the coefficient of elasticity of exports and imports relative to GDP.

The import elasticity coefficient is used to characterize the recession in an economy (T. Andrei, p. 287). In the case of imports, if the result is higher than 1, it can be concluded that with a 1% increase in GDP, the growth rate of imports is higher than 1, i.e. that country consumes more import goods, amid intensification internal activity. This is in fact the situation of the years 1995-1996, 1998, 2000-2004, 2006, 2010-2012 and 2014-2016 in the case of Romania, as shown in Table 3.

Regarding the results of the *Import Elasticity Coefficient* for the years 1997, 1999, 2005, 2007-2009 and 2013, the correct interpretation for Romania is as follows: how many percentages will the volume of our country's imports decrease, as the GDP is reduced by 1%. These subunit results therefore reflect the state of economic recession in Romania, a situation in which, in most cases, there is a decrease in imports amid the reduction of the volume of activity in the economy.

In case of export, high resilience throughout the period analyzed for Romania, except for the years 1996-1997, 2003, 2005-2008 and 2015, when the modulus of elasticity of export values not exceeding 1 shows that there is a competitive market economy, which offers on the foreign market highly sought after products.

In the case of exports, the outlook for GDP growth is favourable, as it can be concluded that the interdependencies between Romania and other countries are becoming more and more pronounced; in the case of import, the conclusion is that more imported goods are consumed. Basically, with a 1% increase in GDP, imports are rising by more.

The absorption capacity of the national market for imported goods is relatively high, in relation to the GDP change, which is in fact the national income, the source of the import coverage. Interpretation of the *Import Elasticity Coefficient* may also be the following: the lower the imports with a 1% decrease in GDP, which means capturing the impact of the decrease in domestic activity on imports.

**Table 3.** Elasticity coefficient of the export and import of Romania and the EU, calculated for the period 1995-2016

Year	Annual growth rate of Romania's imports	Annual growth rate of EU imports	Annual growth rate of Romania's exports	Annual growth rate of EU exports	Romania's annual GDP growth rate	EU's annual GDP growth rate	Romania's imports elasticity coefficient relative to the GDP	EU's imports elasticity coefficient relative to the GDP	Romania's exports elasticity coefficient relative to the GDP	EU's exports elasticity coefficient relative to the GDP
1995	145,38	121,63	130,70	122,04	103,93	102,73	1,40	1,18	1,26	1,19
1996	110,59	102,82	102,59	103,42	107,14	101,88	1,03	1,01	-0,96	1,02
1997	98,50	100,07	103,17	100,33	103,21	102,78	0,95	0,97	1,00	0,98
1998	103,58	106,73	95,72	105,25	95,14	102,99	1,09	1,04	1,01	1,02
1999	89,21	102,25	103,57	100,09	97,90	103,07	0,91	0,99	1,06	0,97
2000	123,40	105,23	122,75	103,08	99,62	103,94	1,24	1,01	1,23	0,99
2001	119,00	102,68	112,36	104,22	111,54	104,04	1,07	0,99	1,01	1,00
2002	108,02	99,57	114,65	101,61	107,27	103,57	1,01	0,96	1,07	0,98
2003	111,48	100,46	106,34	99,57	108,44	101,49	1,03	0,99	0,98	0,98
2004	123,22	109,10	119,68	109,21	116,01	104,99	1,06	1,04	1,03	1,04
2005	126,09	110,28	120,65	108,72	130,65	104,39	0,97	1,06	0,92	1,04
2006	125,45	113,25	119,51	112,19	122,68	105,69	1,02	1,07	0,97	1,06
2007	125,84	107,49	115,83	107,76	127,42	105,92	0,99	1,01	0,91	1,02
2008	105,03	104,35	104,94	103,19	113,55	100,57	0,92	1,04	0,92	1,03
2009	71,08	82,21	85,93	84,23	84,56	94,27	0,84	0,87	1,02	0,89
2010	119,79	116,21	124,22	115,55	105,26	104,27	1,14	1,11	1,18	1,11
2011	116,04	110,13	119,97	110,49	105,18	102,92	1,10	1,07	1,14	1,07
2012	100,21	102,73	101,83	104,83	100,15	101,92	1,00	1,01	1,02	1,03
2013	103,17	99,89	114,63	101,41	108,05	100,81	0,95	0,99	1,06	1,01
2014	107,08	103,61	108,02	103,93	104,23	103,35	1,03	1,00	1,04	1,01
2015	106,62	105,50	106,18	107,38	106,39	105,08	1,00	1,00	1,00	1,02
2016	107,54	101,07	106,73	101,02	106,01	100,68	1,01	1,00	1,01	1,00

Source: For the period 1995-2011, the books: Giurgiu, Adriana (2013), and Giurgiu, Adriana (2008); for the period 2012-2016, own calculations based on EUROSTAT statistical data, [http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search\\_database](http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database), accessed during June-August 2017.

The result of the higher elasticity coefficient in the case of imports than in the case of exports is only the direct consequence of the fact that imports in fact have a rhythm of higher growth than exports, and the reference to the growth rate of GDP leads to a higher result. If the period is analyzed for Romania, except for the years 1995-1996, 1998, 2000-2001 and 2003-2007, respectively, in 2016, the coefficient of elasticity of imports was higher than the modulus of elasticity of exports, although subunit in the years 1997, 1999, 2005, 2007-2009 and 2013 respectively.

The result greater than one every year (except 1997, 1999, 2005, 2007-2009 and 2013), if not both, at least one of the components of foreign trade shows that, overall, the Romanian foreign trade react quite much to a 1% change in GDP. Negative results denote upward developments, ie, with a rise in GDP, Romanian exports have fallen, which is an alarm signal. This phenomenon occurred only in 1996 throughout the analyzed period, which may be a good sign. The high value of coefficients in the 2010-2011 quite contradictory at first glance, is also explained on the basis of high levels of export and / or imports and especially

their dynamics, while GDP recorded a positive growth rate compared to 2009, when the growth rate was negative, amid the international economic and financial crisis.

#### 4. Conclusions

As we have shown in this article, in the field of efficient external trade and increased export competitiveness, the success of macroeconomic measures and policies depends directly on how entrepreneurs implement and empower them. In this context, we were concerned with the identification of innovative methods and strategies for establishing and capitalizing on the competitive advantages of Romanian companies with foreign trade activity as a result of our country's accession to the European Union, in order to solve the complex economic problems generated by the major trade deficit Romania, as well as the creation of mechanisms for implementing the strategies and methods resulting from the research conducted to reduce this deficit and to maximize the positive effects of Romania's accession to the EU.

Certainly, future research directions will mainly address and develop the same directions we have been dealing with so far, but deepening our research in several directions, such as:

- Regulatory aspects of international trade by investigating the extensive ramifications of the tensions that exist in the relationship between the WTO and the regional trade agreements, which we consider to be of systemic significance, as they also place strong emphasis on Romanian foreign trade and our commercial policy, Romania, as an EU member, being part of more than half of the world's functioning bilateral trade agreements;
- Geographic reorientation of Romania's foreign trade by providing studies to Romanian business agents enabling them to maximize the opportunities offered by the rich portfolio of free trade agreements made available by the European Union on the basis of the products that make up current structure.

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# THE EXTERNAL TRADE CONCENTRATION AND SPECIALISATION INDEX OF ROMANIA INBETWEEN 2000-2016

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**Abstract:** The empirical studies carried out on Romania's foreign trade performance aimed at establishing, on the one hand, the products with which Romania is competitive in the foreign markets and which are the external markets that the Romanian products are most competitive, so that the responsible factors the Romanian foreign trade can adopt the strategy of correct and scientifically based promotion at a macroeconomic level and on the other hand to indicate to the Romanian economic agents the directions they must orientate or reorient their exports in order to maximize the derived positive effects from the EU accession, taking advantage of the free trade agreements that we have also taken as partners from the moment of Romania's accession to the EU, agreements that create us access in advantageous conditions, of high competitiveness, on foreign markets with which Romania did not agree before the EU accession, and at the same time to encourage the export activity of the Romanian economic agents that produce products identified in the researches carried out in this study, as having a high competitive potential for export on the markets concerned. In this context, we were concerned with the identification of innovative methods and strategies for establishing and capitalizing on the competitive advantages of Romanian companies with foreign trade activity as a result of our country's accession to the European Union, in order to solve the complex economic problems generated by the major trade deficit Romania, as well as the creation of mechanisms for implementing the strategies and methods resulting from the research conducted to reduce this deficit and to maximize the positive effects of Romania's accession to the EU. As it is well known, export competitiveness is a fertile ground for analyzing entrepreneurial potential and how it manifests itself, with entrepreneurial culture representing, together with other specialized factors of production, an important source of competitive advantage and one of the determinants of national competitive advantages. The analysis of the exchange ratio and coverage and specialization of the foreign trade for the whole period 1990-2016 was also carried out in order to highlight the evolution of Romania's foreign trade and the strategic role played by the European Union in this evolution. The present study presents only the analyses and their results for the period 2000-2016, considered eloquent for the European economic integration of Romania, taking into account the fact that in February 2000 the negotiations for the accession of our country to the EU started.

**Keywords:** Romania; EU membership; trade balance; external trade; concentration index, specialisation index; Herfindahl-Hirschmann coefficient; Romanian import and export.

**JEL Classification:** F10; F13; F14; F15, F19.

## 1. Introduction

In the evolution and the development of the trade theories and policies, the current debates on the EU Common Trade Policy (CTP) and its impact on Romania's trade and foreign trade policy, as well as the issue of political lobbying in the context of trade policy, are addressed.

An important part of the research is devoted to the efficiency of foreign trade and export competitiveness, approached from the point of view of the results of the empirical studies on the performance of Romania's foreign trade, including by reference to the European Union. As it is well known, export competitiveness is a fertile ground for analyzing entrepreneurial potential and how it manifests itself, with entrepreneurial culture representing, together with other specialized factors of production, an important source of competitive advantage and one of the determinants of national competitive advantages. The analysis of the exchange ratio and coverage and specialization of the foreign trade for the whole period 1990-2016 was also carried out in order to highlight the evolution of our country's foreign trade and the strategic role played by the European Union in this evolution. The present study presents only the analyses and their results for the period 2000-2016, considered eloquent for the European economic integration of Romania, taking into account the fact that in February 2000 the negotiations for the accession of our country to the EU started.

## **2. Literature Review on the Economic Theory and Model**

The dynamics of Romania's export performance was assessed by a method focused on three distinct research directions: (1) the evolution of the hierarchy of products exported in the reference years 2001 and 2011, (2) the performance evolution of key products exported in 2001, and (3) the position of key products exported in 2011 at the level of 2001. The analysis of domestic revenues generated by those who produce their exports and suppliers is based on the global value chain according to the methodology proposed by the European Commission in the Competitiveness Reports 2012 and 2013. The results of the corroboration of the two analysis conducted by Țurlea et al. (2014) can be used mainly to highlight the extent to which the current structure of Romanian exports contributes to the creation of domestic revenues in Romania.

From the research undertaken to date, it appears that there is still no unanimously accepted model of quantification of export competitiveness on the one hand because of the complexity and lack of consensus on the concept of competitiveness and on the other hand because of the multitude of factors affecting export performance. Export competitiveness is measured differently within the same institution as well as between different national and international organizations. For example, in the OECD, for the purpose of calculating export competitiveness indicators, only a limited number of members and a very small number of developing countries, whose trade holds a certain share in world trade, are considered. According to the OECD, ideally, the measurement of export competitiveness should be subject to the following three basic criteria (Durand, M., Simon, C., Webb, C., 1992, p. 149):

1. Coverage of all sectors exposed to international competition, which means taking into account exclusively all traded or tradable goods subject to international competition;
2. Coverage of all markets open to competition;
3. Building on data that is totally comparable at international level.

Within the best models of competitiveness in the nation or region (Porter, 1990, 2001; Cho, 1994, 1995; Rugman, Moon, et al., 1998; Begg, 1999) parameters and indicators for measuring national competitiveness can be identified, but not the competitiveness of exports. Quantifying international competitiveness is reflected by the OECD Secretariat suggestively: "measuring international competitiveness is - even in the context of a well-defined conceptual framework - often a problem of choice and compromise on available data and implies a series of compromises between different criteria and objectives". (Giurgiu, 2018)



### 3. Trade Concentration and Specialisation Index

In order to determine the share of trade with a product group in the total trade of Romania, we calculated the Herfindahl-Hirschmann-HHI coefficient (see Table 1), stating that the analysis is based on the product groups included in the Combined Nomenclature. The interpretation of the coefficient is as follows: the closer the market is to becoming a monopoly, the greater the concentration of the market (and the lower the competition). If, for example, there was a single firm in an industry, this firm would have a 100% market share and HHI would be 1, indicating a monopoly. If there were thousands of competing firms, each would have a market share of nearly 0%, and the HHI would be close to zero, indicating almost perfect competition. The aim is to highlight the importance of the groups in Romania's total trade and, depending on the results, the product groups more relevant to the analysis of Romanian foreign trade during the reference period for the present research will be analyzed in detail.

The diversification index is calculated by measuring the absolute deviation of the trade structure of a country from the world structure. The diversification index has values between 0 and 1. A value closer to 1 indicates a greater divergence from the world structure. This index is a modified version of the Finger-Kreinin method of measuring similarity in trade.

**Table 1.** Global Herfindahl-Hirschmann Coefficient on Romanian Import and Export (in Euro) 1995-2014

Year	Romanian exports			Romanian imports		
	Number of products	Concentration Index	Diversification Index	Number of products	Concentration Index	Diversification Index
1995	215	0.124	0.582	240	0.091	0.395
1996	216	0.127	0.605	240	0.086	0.380
1997	229	0.126	0.576	243	0.080	0.394
1998	222	0.132	0.586	240	0.063	0.357
1999	223	0.130	0.549	242	0.070	0.348
2000	226	0.133	0.540	245	0.066	0.351
2001	229	0.137	0.575	245	0.065	0.346
2002	230	0.131	0.546	245	0.056	0.345
2003	234	0.119	0.562	246	0.060	0.313
2004	235	0.124	0.505	247	0.074	0.288
2005	242	0.115	0.474	252	0.075	0.281
2006	238	0.100	0.443	249	0.069	0.261
2007	239	0.097	0.402	247	0.070	0.247
2008	239	0.096	0.435	250	0.063	0.266
2009	242	0.094	0.423	248	0.066	0.263
2010	241	0.091	0.425	247	0.063	0.260
2011	242	0.091	0.414	247	0.062	0.256
2012	242	0.091	0.414	247	0.062	0.256
2013	242	0.098	0.427	247	0.065	0.277
2014	243	0.099	0.418	249	0.068	0.272
2015	244	0.103	0.424	248	0.059	0.266

Source: Own calculations based on statistical data provided by UNCTADstat: *Table report: Merchandise: Product concentration and diversification indices by economy, annual, 1995-2015*

\* Products / product groups with an export / import value of over 100,000.00 Euro.

Table 1 shows that gradually, mainly after 2007, the level of import concentration decreased, which means that a larger number of product groups corresponds to higher weights in the total import. In the case of exports, there is a relatively inverse growth trend up to the level of 2005. From a higher concentration and a high specialization in the period 1995-2005, it turned to a lower concentration, so that in the years 2008 - 2012. The concentration coefficient recorded the smallest values in the analyzed period, which means that there was

a reduced specialization. The 2010-2015 period however reveals an increasing trend, but well below the 1995-2005 level.

As far as the Diversification Index is concerned, it is between 0.402 and 0.605 for Romanian exports, with the last 10 years of the period (2005-2016) showing a downward trend and values below 0.5, indicating an increasing convergence towards world export structure.

In imports, the values of the *Diversification Index* are much lower than for exports in the case of Romania, the highest value being 0.395 (1995) and the lowest being 0.247 (2007). The tendency of the last 10 years is also decreasing on imports, which means that Romania converges with the structure of world imports, which are becoming more diversified.

Based on these results, clear conclusions cannot necessarily be drawn until we see from which groups we export and import in a larger proportion, which is why we will continue to show in Table 2 the results obtained in the calculation of the concentration indicator, i.e. the share held by each product group in total import. Larger weights are highlighted in the table to see exactly which product groups have contributed most to Romania's total imports.

**Table 2.** Share of CN sections in total imports of Romania in the period 2000-2016

Section CN	Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
I		1,14	1,80	1,65	1,23	1,48	2,03	1,73	1,70	2,08	2,86	2,10	1,76	1,89	2,01	2,09	1,99	2,13
II		2,08	2,16	1,56	2,81	2,06	1,34	1,32	2,02	2,20	2,57	2,43	<b>2,41</b>	<b>2,59</b>	<b>2,63</b>	<b>2,59</b>	<b>3,23</b>	<b>3,46</b>
III		0,26	0,22	0,37	0,26	0,20	0,18	0,18	0,28	0,40	0,41	0,46	0,45	0,44	0,37	0,28	0,29	0,28
IV		<b>3,65</b>	<b>3,59</b>	<b>3,01</b>	2,94	2,78	2,65	2,71	2,51	2,92	<b>3,96</b>	<b>3,36</b>	<b>3,48</b>	<b>3,85</b>	<b>3,93</b>	<b>3,79</b>	<b>4,10</b>	<b>4,20</b>
V		<b>14,45</b>	<b>14,34</b>	<b>12,72</b>	<b>12,36</b>	<b>13,42</b>	<b>15,58</b>	<b>14,81</b>	<b>11,95</b>	<b>13,69</b>	<b>9,99</b>	<b>11,03</b>	<b>12,14</b>	<b>13,02</b>	<b>10,60</b>	<b>9,90</b>	<b>6,98</b>	<b>6,14</b>
VI		<b>8,23</b>	<b>7,83</b>	<b>8,42</b>	7,95	7,89	7,44	7,60	7,55	<b>8,26</b>	<b>11,04</b>	<b>9,95</b>	<b>9,93</b>	<b>10,31</b>	<b>10,48</b>	<b>10,18</b>	<b>10,05</b>	<b>9,97</b>
VII		4,45	4,88	5,49	5,92	5,84	5,96	6,20	6,01	5,79	6,52	6,96	<b>7,22</b>	<b>7,14</b>	<b>7,33</b>	<b>7,26</b>	<b>7,32</b>	<b>7,27</b>
VIII		2,77	3,28	3,48	3,15	2,50	2,17	1,85	1,49	1,21	1,43	1,35	1,30	1,27	1,33	1,44	1,40	1,36
IX		0,64	0,71	0,83	0,85	0,91	0,98	0,95	1,13	1,05	0,97	0,85	0,69	0,68	0,71	0,75	0,85	0,95
X		2,22	2,22	2,35	2,36	2,12	1,98	1,89	1,69	1,69	2,30	2,02	1,85	1,68	1,73	1,71	1,69	1,70
XI		<b>16,27</b>	<b>16,11</b>	<b>16,45</b>	<b>14,87</b>	<b>12,62</b>	<b>10,23</b>	<b>8,31</b>	<b>7,07</b>	<b>6,07</b>	<b>7,02</b>	<b>6,49</b>	<b>6,40</b>	<b>6,42</b>	<b>6,57</b>	<b>6,72</b>	<b>6,77</b>	<b>6,95</b>
XII		1,69	1,63	1,64	1,49	1,24	1,11	1,02	1,00	0,96	1,14	1,11	1,16	1,05	1,12	1,21	1,10	1,19
XIII		1,38	1,48	1,63	1,69	1,74	1,88	1,81	1,84	1,88	1,63	1,42	1,36	1,23	1,22	1,22	1,26	1,32
XIV		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,17	0,18	0,17	0,19	0,25	0,26	0,25	0,27	0,27	0,30
XV		6,83	7,33	7,38	7,69	8,37	8,83	<b>9,89</b>	<b>11,06</b>	<b>11,36</b>	9,79	10,93	<b>11,25</b>	<b>10,67</b>	<b>10,48</b>	<b>10,79</b>	<b>10,70</b>	<b>10,06</b>
XVI		<b>24,71</b>	<b>22,65</b>	<b>22,87</b>	<b>23,96</b>	<b>23,78</b>	<b>23,43</b>	<b>24,25</b>	<b>25,05</b>	<b>23,96</b>	<b>27,00</b>	<b>28,58</b>	<b>27,48</b>	<b>26,59</b>	<b>27,74</b>	<b>27,30</b>	<b>28,44</b>	<b>28,09</b>
XVII		4,23	5,00	5,53	6,10	<b>9,23</b>	<b>10,20</b>	<b>11,55</b>	<b>13,84</b>	<b>12,47</b>	<b>7,42</b>	<b>7,38</b>	<b>7,63</b>	<b>7,47</b>	<b>7,84</b>	<b>8,57</b>	<b>9,16</b>	<b>10,09</b>
XVIII		2,69	2,61	2,44	2,22	1,82	1,73	1,74	1,60	1,65	1,67	1,68	1,62	1,69	1,84	1,97	2,27	2,19
XIX		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,05	0,03	0,06	0,04	0,03	0,02	0,02	0,01	0,02	0,02
XX		1,86	1,77	1,89	1,90	1,77	1,89	1,91	2,00	2,15	2,03	1,64	1,60	1,72	1,80	1,94	2,08	2,31
XXI / XXII		0,45	0,40	0,30	0,25	0,23	0,38	0,29	0,00	0,00	0,00	0,00	0,00	0,01	0,01	0,01	0,01	0,01

Source: Own calculations, with 8 decimal, based on statistical data processed from EUROSTAT, *EU trade since 1988 by HS2-HS4 (DS-016894)*, link: <http://ec.europa.eu/eurostat/web/international-trade-in-goods/data/database#>, accessed during June-August 2017.

In the years 2010, 2015 and 2016, there was a high concentration on imports, mainly due to the large share of V (Mineral Products), VI (Chemicals or Related Industries), VII (Plastics and Articles of Plastics rubber and articles thereof), XV (Common metals and articles of base

metal), XVI (Machinery and apparatus, electrical equipment, sound or video recording or reproducing apparatus) and XVII (Transport equipment and auxiliary equipment). Looking at the results, with the exception of Group VII over the period 2000-2010, these product groups were predominantly imported throughout the analyzed period, adding group XI (textiles), which contributed to the decrease in the concentration of the last 9 years, compared to 2000. The large share of imported metals (group XV), although fluctuating throughout the period, is not very satisfying for the metallurgical industry in our country.

The share of the first four groups, which includes the products of the agro-food industry, has grown over the last 7 years in the total imports compared to the beginning of the period, a negative fact because this share should be as low as the climatic conditions in Romania, they allow - theoretically - to ensure the need for basic agro-food products and even to obtain availability for export. The Group II (Vegetable Kingdom Products) and IV (Products of the Food Industry, Drinks, Alcoholic Liquids and Vinegar, Tobacco and Processed Tobacco Substitutes) registered a steady increase in its importance.

The lack of significant oil processing capacities could be reflected in imports with large shares of the mineral product group; however, the results reflect a significant decrease in the weight of this group (Group V) in 2015-2016, as compared to 2000. Chemicals (Group VI) have relatively large shares of total imports throughout the analyzed period, and plastics (group VII) reflects a steadily growing trend as weight, becoming increasingly significant in the structure of our imports. The rising imports of these product groups (VI and VII) are not a positive factor, as it shows the shortcomings of the chemical and plastics industry, which is not able to provide domestic demand, more and more dynamic and diversified.

Growth also records the share of imports of wood products (Group IX) by 2008, with this group actually importing unprocessed wood products (subgroup 44); anyway, starting with 2009, the trend is decreasing, which is a beneficial fact, given Romania's tradition in wood processing.

For textiles (group XI), the share is in continuous decrease so far, mainly due to the fact that it is predominantly produced in the Lohn system, with the main imports being made in subgroups 52 (cotton), 54 (synthetic or artificial filaments; similar forms of synthetic or artificial textile materials) and 55 (synthetic or man-made staple fibres). Demand for the real estate market has led to a slight increase in growth for stone, plaster and cement (Group XIII), but since 2009 has been steadily declining so far, with the level of 2016 being lower than in 2000.

In Table 3 the export weights are shown, with the weights above 4% being generally highlighted, because around this weight we can say that there is some influence of the group in the total exports. It is noted that, unlike import, on export, the concentration is lower, in the sense that several groups of products have contributed with higher shares in total exports.

A favourable conclusion based on the results in Table 3 refers to the continuous increase of the share of machinery and equipment (Group XVI) in the export of Romania, accounting for almost 30% of our country's exports in 2016, which can be explained (e.g. Plexus, Emerson, Celestica, Samsung, etc.), since the main exported subgroup was 85 (electrical machinery, apparatus and equipment and parts of them sound recorders or reproducers, television image or sound recorders or reproducers, parts and accessories of such apparatus). However, correlated with import value data for this group and subgroup, the trade balance is negative, indicating that we are used in this segment as a low cost economy, i.e. group XVI (Machinery and apparatus, electrical equipment and parts thereof; sound recorders or reproducers, recorders or reproducers, TV and parts and accessories of these apparatus) takes the place of group XI (Textiles and articles made of these materials) from the previous period, i.e. we produce in "lohn".

It is also of interest to study the partial export focus results for a comparison with the previous table and to see which groups we predominantly export.

**Table 3.** Share of CN sections in total exports of Romania in the period 2000-2016

Section CN	Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
I		1,22	1,15	1,04	1,21	1,06	0,88	0,82	0,85	0,82	1,12	1,16	1,29	1,62	1,50	1,42	1,44	1,41
II		1,14	1,59	1,27	1,09	1,09	1,24	1,58	1,49	<b>3,55</b>	<b>3,87</b>	<b>4,34</b>	<b>4,63</b>	<b>4,37</b>	<b>6,03</b>	<b>5,85</b>	<b>5,63</b>	<b>6,00</b>
III		0,20	0,22	0,07	0,18	0,34	0,28	0,22	0,23	0,31	0,30	0,44	0,53	0,41	0,48	0,41	0,41	0,34
IV		0,70	0,85	0,76	0,71	0,61	0,62	0,69	1,23	1,73	2,42	2,38	2,43	2,58	2,66	2,95	3,37	3,00
V		<b>7,94</b>	<b>6,92</b>	<b>8,48</b>	<b>7,03</b>	<b>7,19</b>	<b>11,08</b>	<b>10,45</b>	<b>7,76</b>	<b>9,30</b>	<b>6,14</b>	<b>5,50</b>	<b>5,98</b>	<b>6,08</b>	<b>5,74</b>	<b>6,57</b>	<b>4,92</b>	<b>3,98</b>
VI		<b>5,00</b>	<b>4,38</b>	<b>3,48</b>	<b>3,70</b>	<b>4,06</b>	<b>4,47</b>	<b>4,06</b>	<b>3,82</b>	<b>4,23</b>	<b>3,68</b>	<b>4,44</b>	<b>4,82</b>	<b>5,30</b>	<b>4,47</b>	<b>4,02</b>	<b>3,75</b>	<b>3,23</b>
VII		<b>2,20</b>	<b>2,03</b>	<b>2,58</b>	<b>3,26</b>	<b>3,75</b>	<b>3,88</b>	<b>4,22</b>	<b>4,92</b>	<b>5,08</b>	<b>4,94</b>	<b>5,06</b>	<b>5,51</b>	<b>5,67</b>	<b>5,64</b>	<b>5,61</b>	<b>5,66</b>	<b>5,69</b>
VIII		0,96	1,26	1,25	1,21	1,05	0,91	0,86	0,79	0,69	0,65	0,63	0,62	0,66	0,62	0,63	0,67	0,66
IX		5,43	4,65	4,50	4,54	4,40	3,76	3,58	3,36	2,81	3,16	3,28	3,21	3,58	3,79	3,54	3,31	2,86
X		0,78	0,92	0,90	0,86	0,81	0,58	0,52	0,60	0,48	0,57	0,62	0,61	0,62	0,66	0,67	0,69	0,74
XI		<b>24,12</b>	<b>26,18</b>	<b>25,35</b>	<b>25,38</b>	<b>22,31</b>	<b>18,96</b>	<b>16,13</b>	<b>13,31</b>	<b>10,52</b>	<b>9,96</b>	<b>8,50</b>	<b>7,99</b>	<b>8,03</b>	<b>7,50</b>	<b>7,40</b>	<b>7,24</b>	<b>7,08</b>
XII		<b>7,60</b>	<b>8,63</b>	<b>8,43</b>	<b>8,15</b>	<b>6,53</b>	<b>5,79</b>	<b>5,36</b>	4,60	3,68	3,52	3,19	3,04	2,84	2,74	2,73	2,44	2,32
XIII		1,55	1,51	1,45	1,36	1,12	0,93	0,76	0,80	0,64	0,62	0,60	0,56	0,58	0,56	0,56	0,57	0,60
XIV		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,18	0,16	0,20	0,26	0,40	0,54	0,39	0,37	0,35	0,32
XV		<b>15,95</b>	<b>13,31</b>	<b>12,84</b>	<b>12,92</b>	<b>15,44</b>	<b>14,81</b>	<b>15,00</b>	<b>16,29</b>	<b>14,65</b>	<b>10,05</b>	<b>11,91</b>	<b>12,27</b>	<b>11,40</b>	<b>9,54</b>	<b>8,95</b>	<b>8,60</b>	<b>7,81</b>
XVI		<b>14,11</b>	<b>14,73</b>	<b>15,66</b>	<b>16,04</b>	<b>17,55</b>	<b>17,71</b>	<b>20,29</b>	<b>22,17</b>	<b>23,91</b>	<b>26,37</b>	<b>27,10</b>	<b>26,94</b>	<b>25,37</b>	<b>25,20</b>	<b>26,01</b>	<b>27,80</b>	<b>29,44</b>
XVII		<b>4,91</b>	<b>5,25</b>	<b>5,62</b>	<b>5,71</b>	<b>6,27</b>	<b>7,92</b>	<b>9,82</b>	<b>12,11</b>	<b>12,27</b>	<b>16,79</b>	<b>15,52</b>	<b>14,37</b>	<b>15,16</b>	<b>17,02</b>	<b>16,43</b>	<b>16,77</b>	<b>17,60</b>
XVIII		0,40	0,53	0,47	0,46	0,53	0,60	0,68	0,78	0,93	1,21	1,16	1,04	1,18	1,23	1,47	1,80	2,25
XIX		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,09	0,12	0,13	0,09	0,11	0,08	0,11	0,13	0,17	0,19
XX		5,13	5,38	5,39	5,61	5,41	4,93	4,51	4,61	4,12	4,30	3,82	3,64	3,92	4,08	4,23	4,37	4,45
XXI / XXII		0,65	0,52	0,45	0,59	0,49	0,64	0,47	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,02	0,02	0,02

Source: Own calculations, with 8 decimal, based on statistical data processed from EUROSTAT, *EU trade since 1988 by HS2-HS4 (DS-016894)*, link: <http://ec.europa.eu/eurostat/web/international-trade-in-goods/data/database#>, accessed during June-August 2017.

For the first four groups, we will see the same trend as for imports. The share of rising exports in Group II and IV demonstrates that we are starting to exploit the export potential of agriculture, but adequate investments and restructuring are needed in these sectors and in the food industry. Group II (Vegetable Products) registered a constantly increasing trend, doubling in 2008 compared to 2007, and almost decreasing in 2016 compared to 2008. However, its maximum share reached only 6% (in 2016).

Group V (Mineral Products), however, had a very opposite trend to Group II, reaching 2016 by half of 2000 (3.98% versus 7.94% initially). Exports of mineral products have been reduced due to the fact that crude oil has been imported for processing, resulting in a decrease in export possibilities for the products in this group. Thus, we are afraid to say that the effect of Petrom's privatization is positively reflected on the exports of this group, but the group's balance is negative in 2016 (about EUR 1.85 billion), of which subgroup 27 (mineral fuels, mineral oils and products resulting from their distillation, bituminous materials, mineral wax) holds 86.01% (about 1.60 billion Euro deficit in 2016). (Giurgiu, 2008, 2013)

The constantly increasing trend since 2002, although quite small as a share for the whole analyzed period, was recorded also in group VII (Plastics and plastic products, rubber and rubber products), doubling its export share in 2016 as compared to 2002 (5.69% vs. 2.58%);

there is a need for a better diversification of Romanian products, as a major cause of lower export competitiveness of the products in this group.

The most spectacular decline in the analyzed period (2000-2016) was recorded in group XI (Textiles and articles made of these materials), which decreased more than 3 times in these years (7.08% in 2016, compared to 24.12% in 2000). Group XV (Common Metals and Common Metals) had the same trend as Group XI (Textiles and articles made from these materials), reaching 20% in 2016 from 2000. At the base of the temporary increase in export of products (Group XV) have been the liberalization measures adopted since 2000, in particular those concerning the lifting of export restrictions. Nevertheless, there is a cyclical decrease in the weight, which is explained by the reduction of the subsidies granted in the field, which had a considerable role in setting the low prices applied by Romania for the export of products related to this group.

Group XVI (Machinery and apparatus, electrical equipment and parts thereof, sound recorders or reproducers, television image and sound recorders and reproducers, and parts and accessories of such apparatus) and XVII (Transport equipment and ancillary equipment), intensive in technology, are by far the largest groups in our exports since 2009, accounting for 47% of the Romanian exports for 2016. Positive is the increase of the group XVII (Means of transport and equipment ancillary) 4 times during the analyzed period, because unlike Group XVI, the trade balance is positive for both total and 3 of the 4 subgroups. Sub-groups with positive balance are 86 (vehicles and equipment for railways or similar and parts thereof, mechanical (including electromechanical) traffic signalling apparatus), 87 (land vehicles, other than railway and tramway rolling stock, parts and accessories of them) and 89 (ships, vessels and floating devices); the negative trade balance recorded by the 88th subgroup (air vehicles, spacecraft and parts thereof), which is interesting considering the products in this subgroup. An explanation for subgroup 88 could be given by acquisitions to equip the army within NATO's engagement. Another interesting aspect is that the positive balance is the largest (cumulated over the whole period) in subgroup 89 (ships, vessels and floating devices); however, in the year 2016, the highest positive balance (€ 2.44 billion, or about 74% of the total group) registered, as it was natural if we take into account Renault's production in Romania, subgroup 87 (land vehicles, other than railway and tramway rolling stock, parts and accessories thereof). The favourable result obtained in Group XVII (means of transport and auxiliary equipment) can also be a consequence of the successful privatization of the Romanian automotive factories, a sector that has already re-oriented with positive effects on the world market and aims at gaining new segments in the African markets and South America, that is, precisely the markets in which our country did not have a large concentration of trade.

As a result, we calculated the geographical concentration on the relationship with the EU in terms of exports. The overall results obtained for the values of the Hirschmann coefficient on Romania's relation with the EU are higher than the Hirschmann coefficient values in the case of the Romanian commercial flows with the whole world, as can be seen from the data presented in Table 4.

Table 4 merely shows that Romania, like all the countries of Central and Eastern Europe, experienced a change in the geographical orientation of trade, with practically a diversion of trade from the traditional markets of the CAER block during the communist regime and trade creation with the countries of the European Union, so that the potential of the market for the products of these countries has become bigger.

From Romania's point of view of, the existing situation is not very favourable in the medium and long term, because the comparatively reduced advantage and the low competitiveness of domestic products in the developed EU markets leads to a rapid and strategic reorientation of our exports - maximizing the potential offered by the free trade agreements concluded by the European Union - towards the countries of Africa, the Middle East and those of Latin America, to which our openness was not so high during the period under review.

**Table 4.** The global and EU Hirschmann coefficient for the Romanian import and export from 1995-2014

Year	Global Import	UE Import	Global Export	UE Export
1995	0.091	0.064	0.124	0.159
1996	0.086	0.066	0.127	0.166
1997	0.080	0.073	0.126	0.174
1998	0.063	0.070	0.132	0.171
1999	0.070	0.072	0.130	0.160
2000	0.066	0.066	0.133	0.167
2001	0.065	0.066	0.137	0.170
2002	0.056	0.059	0.131	0.160
2003	0.060	0.059	0.119	0.142
2004	0.074	0.060	0.124	0.137
2005	0.075	0.062	0.115	0.124
2006	0.069	0.065	0.100	0.108
2007	0.070	0.063	0.097	0.097
2008	0.063	0.056	0.096	0.105
2009	0.066	0.058	0.094	0.102
2010	0.063	0.056	0.091	0.097
2011	0.062	0.055	0.091	0.098
2012	0.062	0.055	0.091	0.098
2013	0.065	0.062	0.098	0.107
2014	0.068	0.064	0.099	0.109

Source: Own calculations based on data taken from UNCTADstat ([Bilateral concentration indices of merchandise exports and imports, annual, 1995-2014](#))

#### 4. Conclusions

The results obtained from the empirical researches on the performance and efficiency of Romania's foreign trade and the competitiveness of its exports have opened new horizons for the deepening of the research, which has focused in the last years on the sectors of the Romanian economy identified with competitive advantages and potential for export, the tourist services sector and the medical sector, interconnected by their competitive advantages in agro-tourism, rural tourism and medical tourism respectively, which can also benefit from the potential offered to the food industry by the competitive advantages of organic agricultural products in our country; also the textile industry (including clothing) has a very high export competitiveness, which is why it has been the subject of in-depth research under various economic aspects, all the more so - even if, as shown in the present study - there has been a decline in competitiveness in the recent period - we are convinced that, alongside the footwear industry and the furniture industry, they still have high competitive potential if they are reoriented towards high quality, sophisticated, high-value products for developed markets (e.g. footwear leather with leather soles, solid wood furniture, hand carved). For this reason, we intend to deepen the research of these sectors of the Romanian economy and in the future in multidisciplinary teams, which allow us to better diagnose the causes of the loss of competitiveness and identify viable solutions for the recovery of these sectors on a competitive basis.

Certainly, future research directions will mainly address and develop the same directions we have been dealing with so far, but have deepened our research in a number of directions, such as the competitiveness of product groups belonging to Section II (Vegetable Products) Section IV (Food Industry Products), Section XI (Textiles and articles thereof, including clothing), Section XII (Footwear) and Section XX (Furniture), respectively, of the Romanian Export Nomenclature according to TARIC3, by investigating the links dynamic between productive activities that go beyond a certain sector and a disaggregated analysis at the

industry level, to be correlated later with the results already achieved with regard to the geographic orientation of our foreign exchanges and the export market shares.

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